译者序

蒸汽机历史：

世界上第一台蒸汽机是由古希腊数学家亚历山大港的希罗 (Hero of Alexandria) 于 1 世纪发明的汽转球 (Aeolipile)，是蒸汽机的雏形。

约 1679 年法国物理学家丹尼斯·巴本在观察蒸汽逃离他的高压锅后制造了第一台蒸汽机的工作模型。约与此同时萨缪尔·莫兰也提出了蒸汽机的主意。

需要特别注意的是，许多教科书上（历史书、物理书）说瓦特是蒸汽机的发明者。这是误传。蒸汽机是英国人萨维利（Savery）于 1698 年、纽可门（Newcomen）于 1705 年各自独立发明的，用于矿井抽水。当时效率很低。

1765 年，瓦特在修理纽可门机的基础上，对蒸汽机做了重大改进，使冷凝器与汽缸分离，发明曲轴和齿轮传动以及离心调速器等，使蒸汽机实现了现代化，大大提高了蒸汽机的效率。

自 18 世纪晚期起，蒸汽机不仅在采矿业中得到广泛应用，在冶炼、纺织、机器制造等行业中也都获得迅速推广。

19 世纪末，随着电力应用的兴起，蒸汽机曾一度作为电站中的主要动力机械。1900 年，美国纽约曾有单机功率达五兆瓦的蒸汽机电站。

蒸汽机的发展在 20 世纪初达到了顶峰。它具有恒扭矩、可变速、可逆转、运行可靠、制造和维修方便等优点，因此曾被广泛用于电站、工厂、机车和船舶等各个领域中，特别在军舰上成了当时唯一的原动机。

电的历史：

1767 年蒲力斯特里（J.B.Priestley）与 1785 年库仑（C.A.Coulomb 1736-1806）发现了静态电荷间的作用力与距离平方成反比的定律，奠定了静电的基本定律。

1799 年，意大利的伏特（A.Voult）用铜片和锌片浸于食盐水中，并接上导线，制成了第一个电池，他提供首次的连续性的电源，堪称现代电池的元祖。

1831 年英国的法拉第（M. Faraday）利用磁场效应的变化，展示感应电流的产生。制出了世界上最早的第一台发电机。

1832 年，法国人毕克西发明了手摇式直流发电机。

1865 年、苏格兰的麦克斯韦（J. C. Maxwell）提出电磁场理论的数学式，预测了电磁波辐射的传播存在。将电学与磁学统合成一种理论，同时证明了光是电磁波的一种。指出电荷的分裂性而非连续性的存在。

1866 年德国人西门子（Siemens）制成世界上第一台工业用发电机，自励式直流发电机。

1882 年，美国的戈登制造出了输出功率 447KW，高 3 米，重 22 吨的两相式巨型发电机；

1887 年德国赫兹（H.Hertz）展示出这样的电磁波。

1895 年洛伦兹（H.A.Lorentz）假设分裂性的电荷是电子（electron）。

1896 年，特斯拉的两相交流发电机在尼亚拉发电厂开始劳动营运，3750KW，5000V 的交流电一直送到 40 公里外的布法罗市；

1897 年英国汤姆生（J.J.Thomson）证实这些电子的电性是带负电性。

1898 年由伟恩（W.Wien）在观察阳极射线的偏转中发现带正电粒子的存在。

1889 年，西屋公司在俄勒冈州建设了发电厂，1892 年成功地将 15000 伏电压送到了皮茨菲尔德。

1906 年，爱迪生用钨丝来做灯泡，一直沿用到今天。

自由能历史：

牛顿（1643-1727）认为力不是抽象的，是一种机械运动的结果，也就是说力的作用是通过一种更基本的粒子完成的。不过它到死也没搞清楚这种作用的模型。

法拉第（1791-1867）证实了牛顿的猜想，并由麦克斯韦（公元 1831～公元 1879）总结出麦克斯韦方程。法拉第已经发现电磁场是由更基本的粒子组成，麦克斯韦总结出这种粒子的运动规律。这种粒子以前人们叫作“以太”。

约翰.科利（1827-1898）少年时代就制做了一个很有趣的机器。上面有 17 片贝壳，其中有 8 片贴在转动的小轮子上，有 9 片贴在固定的部位，只需要最初推动轮子转动起来就可以。1874 年 11 月开始展览第一台他的精心制造的发动机。

尼古拉·特斯拉（1856 – 1943）时代，据说特斯拉完成了统一场论，不过没有发表出来。特斯拉申请了大量自由能相关的专利也是不争的实现。

之后就不说了，手册中多的是。从时间上看，人们对世界的真像，对统一场论人追求从来没有停止过。一部分科学家已经在正确的路上走的很远，虽然大部分人已经误入歧途。

译者读过的关于自由能理论的相关书籍：

Keshe 的三本书：《物质创造的普遍秩序》、《宇宙起源》、《光的结构》(2010 年以后)

《磁流》(1945 年)：通过实验证明磁是双向粒子流。

《纽曼的能源机》(1964 年)：介绍了一种能源机的原理，后面也介绍了光、引力、惯性、宇宙的理论。

《自由能源手册》(2005 年)：对以前一些装置的收集。

《人类的科学：在这个星球上我们的探索》(2007 年)：中国人自己写的，介绍新宇宙观，从第 8 章开始看。

《标量波理论和科学革命》(1998 年)：日本人写的，不是特别好。

其中有的只读了部分。

其它一些认为比较好的还没读的书：

《约翰.科利——自由能量的先驱者》

《维克托的磁悬浮装置》

《沃尔特-拉塞尔的新宇宙观》

首先声明：以下观点仅为个人 YY 观点，不要太信以为真。

同质的思想：

世间万物都是由相同本质的事物组成的，宇宙、银河系、太阳系、地月系、原子系，以及人们现在还观察不到的更微小的系统。

它们都是由回旋的小系统组成，大到宇宙小到原子都在按相同的规律运动。如果把一个原子看成一个宇宙，其内也可以这样分下去。

最后我们只能抽象一种粒子，一种回旋粒子，最终不可再分的粒子来描述一种理论，一种统一的理论。

至于这种粒子存在不，那是以人类观测能力定的，一个漩涡是由很多小漩涡组成的，小漩涡又是由更小的漩涡组成的…所以说，没有最小只有更小，只不过是结构是同样的。

至于这种回旋的粒子初始的回旋从哪来，我们基本找不到最终的粒子，就不要考虑这种问题了。

但我们知道有一种理论可以解释任何的自然现象，适用于已知和未知的任意大和小的级别。

在翻译《纽曼的能源机》时我给翻译成了陀螺子，因为纽曼认为这种粒子和陀螺仪效应一样。

一说粒子，不一定是一种刚体小球，可能是能量涡流（就像水的涡流一样），至于这种粒子是什么样，要看你研究的侧面是什么。

以太（陀螺子）的模型：

场是由以太来组成的，那么以太就可以演化出场的特性。

让我们来看看以太的运动方式：

1. 以光速自旋。你可以想一下银河系的图。
2. 以光速在某方向运动。

由以上两性质可以神奇的得出 $E=MC^2$，因为根据牛顿定律动能为 $1/2MV^2$。

排斥和吸引模型：

磁场如何排斥和吸引？你把以太粒子相像成自行车飞轮，自行车飞轮只能向一个方向转，因此只有一种转动，不能有的正转有的逆转。两个旋转的飞轮如何“排斥”和“吸引”？

相像两个旋转的飞轮，你一定是想像成两个同时顺时针或逆时针的了，对不对。同向的飞轮是不能咬合在一起的，这就是排斥。那么怎么吸引呢？你把一个飞轮翻个面就行了，不用我多说了吧。

磁场模型：

场是由以太组成的，那么磁场怎么会有两极，怎么排斥和吸引的？

同样的陀螺子由磁体的两极发出，由于方向相反，会产生反方向的进动，N 极出来的会向 S 极飞，S 极出来的会向 N 极飞。两者在相遇时是排斥的，因为从一个方向看它们自旋方向相同。

由于陀螺进动效应，陀螺子是在螺旋轨道上飞，中间是空的，连续的陀螺子组成一个管道，管壁上是密集的陀螺子，这样一个管道就是磁场里的一条磁感线。正反方向的磁感线也是排斥的，因为在同一视角陀螺子旋转方向相同，进动的管旋转方向也相同。这就形成一种密集的动态机械区域。

以上的排斥模型是建立在磁体 NS 极发出同样的陀螺子基础上的，如果从 N 极看发出的陀螺子是顺时针自旋，那么从 S 极看发出的陀螺子就是逆时针自旋，就如北极看地球逆时针南极看顺时针一样。

（实际也是北顺南逆，这样才符合右手定则产生的电流方向。）

当然，发出的陀螺子也可能是相反的，如地球人头都向天一样，这样 NS 发出的陀螺子从一个角度看就是自旋方向相反了。

本书中用的是排斥模型，我也认为是这样的，原因有二：

1. 发出和吸收的陀螺子自旋方向应该相同，如果北极发出逆自旋的陀螺子，南极要发出顺处处自旋的陀螺子在转到 N 极时才会是逆自旋。(从 NS 各自视角看。)
2. 一个更简单的原因，磁场能量会在磁体外循环就是因为内部相互排斥才挤到外面的。物质的中的粒子永远在排斥和吸收陀螺子（能量交换），排序会导致一部分交换被排斥到磁体外部形成磁场。

磁场的排斥和吸引：

明白上面的模型这很简单了，你可以自己相像一下，或看书中内容。

关于电能：

我们有一种固有的思想，认为电能是电子的流动。电动机是靠电子流动才转动的吗？显然不是，是靠电磁感应，是靠电场和磁场的感应。电子的运动反而是一种额外的、有害的运动。只要在正确的时间序列里电场和磁场发生对应的变化，能量就是可以传递的。**电能是电场的传递**。

关于电场、引力：

TODO:

关于 keshe 的理论：

TODO

第 1 章 历史的回顾

非重点

第 2 章回转仪（陀螺仪）的运动

Chapter 2 GYROSCOPIC ACTIONS

注：mechanical 开始解释成“机械的”，后来改为“力学的”，在有“机械”或“力学”的翻译处可能不通，不影响理解。

"The way in which Faraday made use of his lines of force in coordinating the phenomena of electric induction shows him to have been a mathematician of high order, and one from whom the mathematicians of the future may derive valuable and fertile methods."

-James Clerk Maxwell

法拉第用力线表示电感应现象展示了他已经是一个有很高水平的数学家，未来的数学家可能从他的方法中得到宝贵和丰富的方法。

-麦克斯韦

I will begin with the scientific facts concerning my initial reading in March, 1965 on the nature of Michael Faraday's Generator.

我将从我在 1965 年 3 月开始读的迈克尔-法拉第的发电机中的科学事实开始。

Anyone who cannot recognize the veracity of certain conclusions that I understood when I initially studied Faraday's facts has been unjustly influenced by the teaching process which rewards one for memorization and discourages questioning of the subject matter taught.

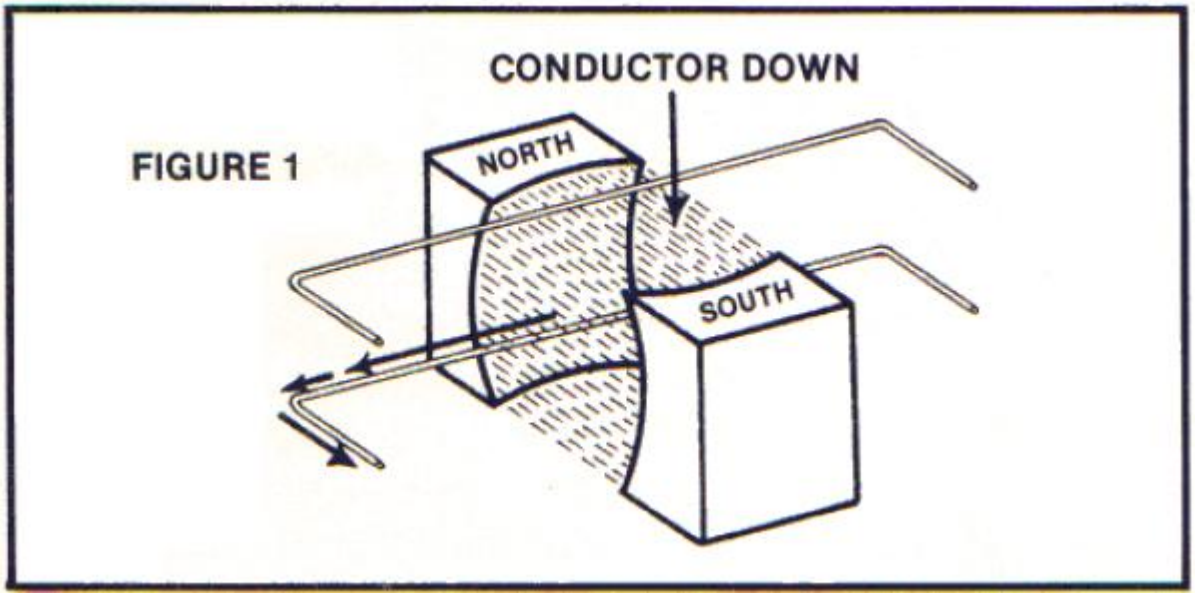
所有人都没有认识到某些结论的真像，当我开始学习法拉第的研究时我已经明白了，这些事实被不鼓励质疑鼓励死记硬背的教学过程不公正的影响了。

As you read the following list of experimental facts concerning Faraday's generator, you will retrace the steps of my initial readings during March 1965. With open eyes and an open mind, question for yourself what would happen under the conditions described below.*

当你读下面的关于法拉第的发电机实验事实时，你将追溯我在 1965 年的步伐。打开双眼打开思想，问你自己在下面描述的情况下会发生什么。

The facts of Faraday’s Generator:

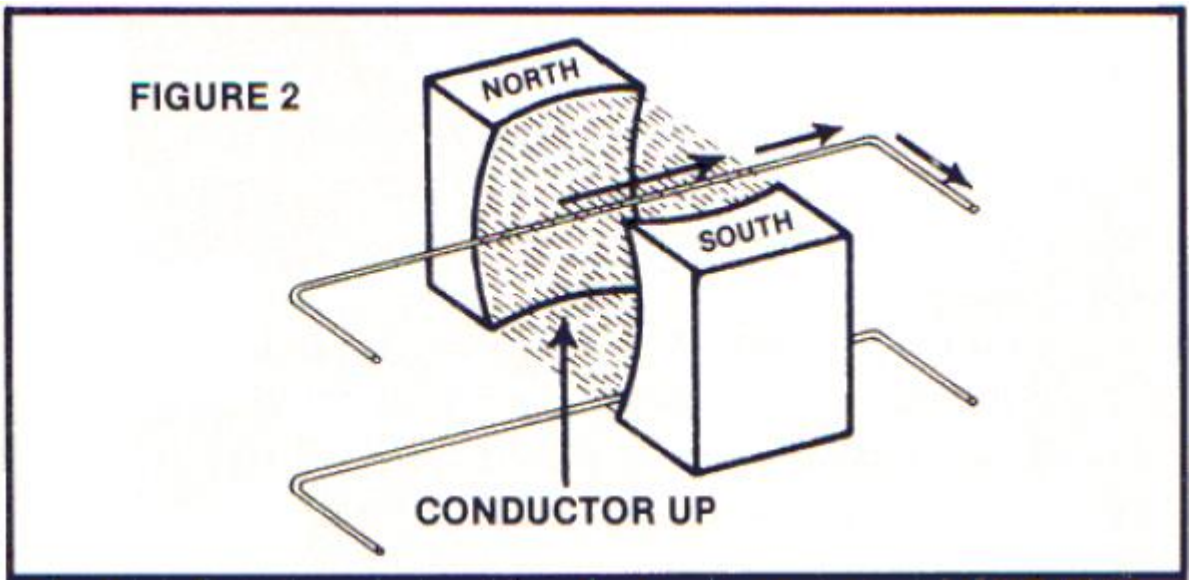
法拉第的发电机的事实：



1. Push a conductor wire down and through a magnetic field at right angles to the lines of force and the electric current will flow to the left as drawn.

1.向下移动导线垂直于磁力线穿过一个磁场区域，电流会向左流。

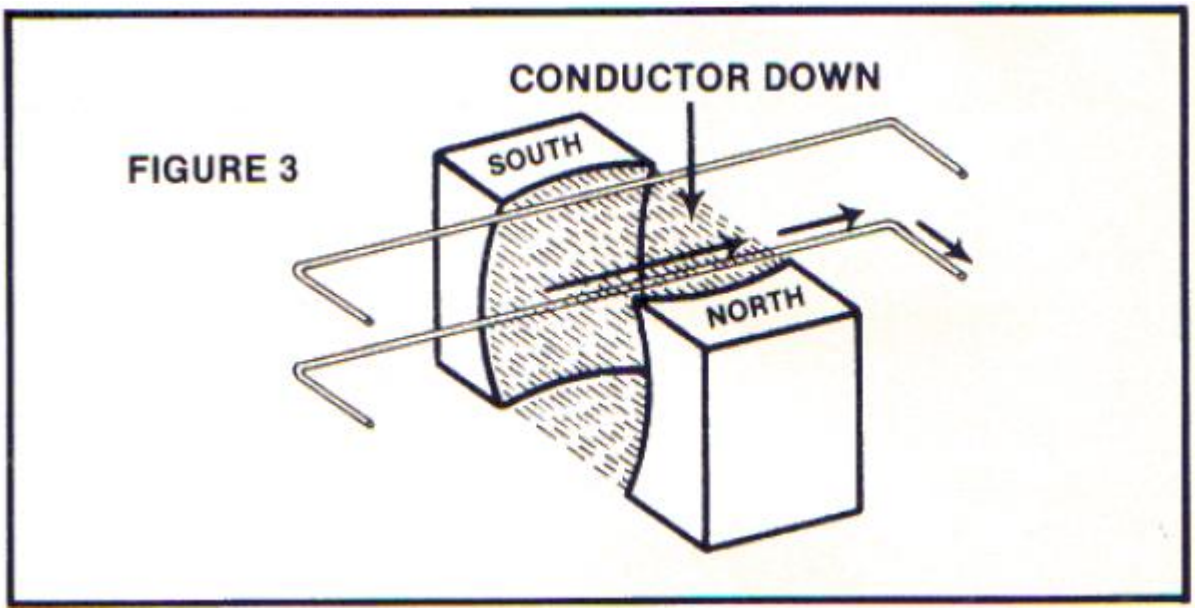
注：如图 1 中运动导线会产生向左的电流，右手定则。



2. Push a conductor up and through a magnetic field at right angles to the lines of force and the electric current flows to the right as drawn (opposite to Figure 1 above).

2. 向上移动导线垂直于磁力线穿过一个磁场区域，电流会向右流（和图 1 相反）。

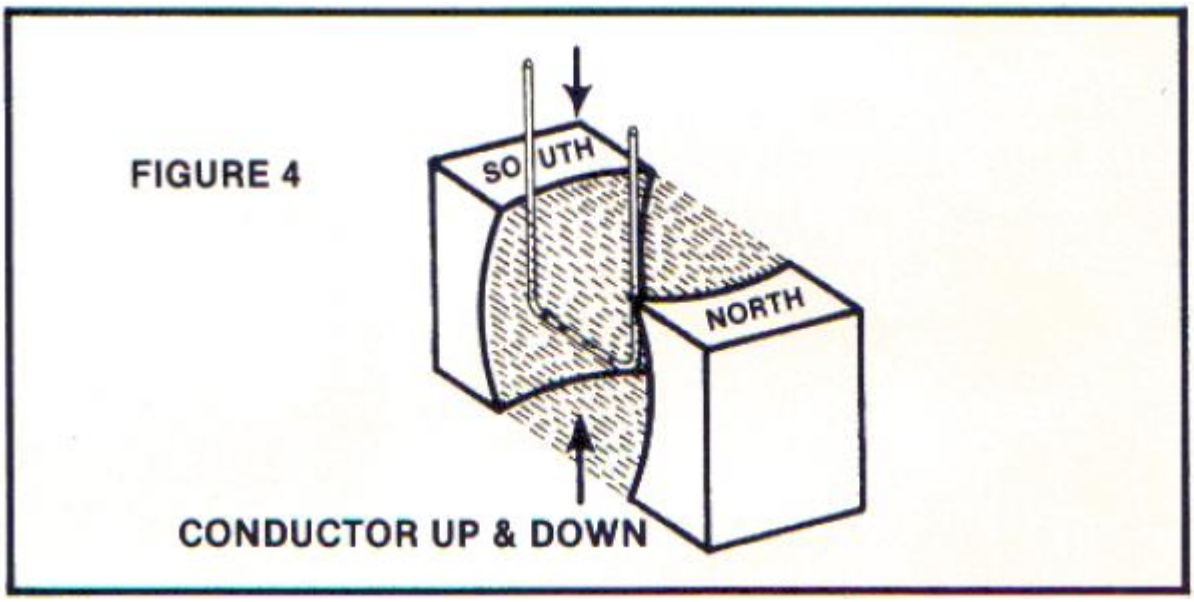
注：如图 2 中运动导线会产生向右的电流。



3. Flip over the magnet 180^0 and the direction of the electric current flow will be reversed from that of Figures 1 and 2 above, although the direction and motion of the conductor remain the same (compare Figure 3 to Figure 1 and observe opposite results).

3.将磁体对调 1800 电流方向将和图 1 图 2 中的方向相反，虽然导线移动方向一样（图 3 和图 1 相比，观察相反的结果）。

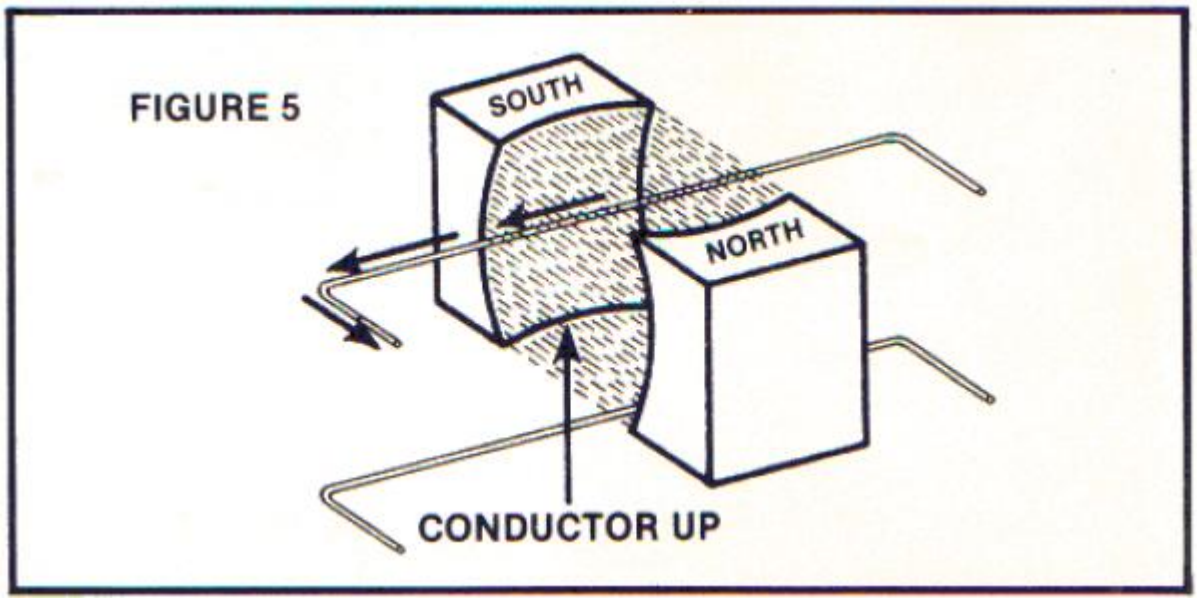
注：对换磁极，运动方向不变，电流方向变了。



4. Push the conductor "down" or "up" in a motion parallel to, and through the magnetic lines of force: no electric current will flow despite a vigorous or energetic pushing effort.

4.平行于磁力线上下移动导线：没有电流产生，不论用多大的力。

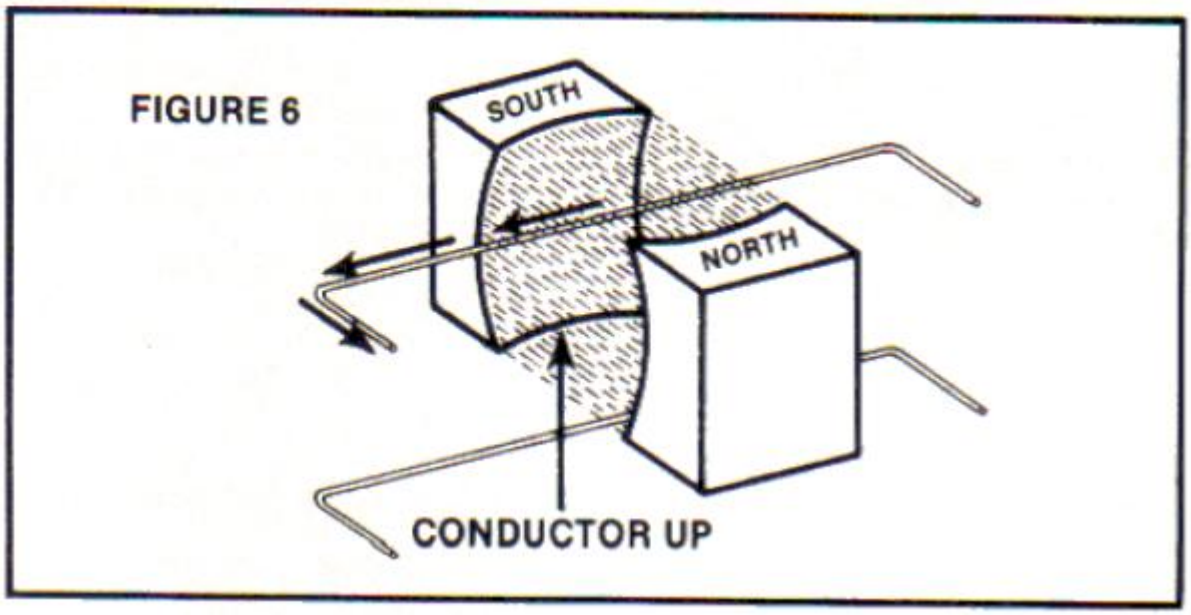
注：和磁力线上下平行运动不会产生电流。



5. However, although the conductor can be very slowly pushed at right angles to the magnetic lines of force, the resulting electric current will move at the speed of light.

5.然而，虽然导线垂直于磁力线非常缓慢移动，电流将以光速运动。

注：这里的光速运动的电流是指电场。



6. The conductor can be disconnected from the ammeter, flipped over 180°, reconnected to the ammeter to repeat the same motions of the conductor through, and at right angles to the magnetic lines of force (as in Figures l - 3). Identical results of the electric current flow will then be observed even though the conductor has been flipped over 180°. (See Figures 5 and 6: the conductor in Figure 6 has been flipped over 180° from that of Figure 5, yet the direction of current flow is identical.)

6.将导线和电流表断开，对调两端重新连接，重复图 1-3 的运动，导线垂直于磁力线穿过磁场。产生的电流运动方向没有改变，虽然改变了导线的两端。(看图 5 和图 6：图 6 中的导线相比图 5 已经翻转了 180°，然而电流的方向没有改变。)

注：说明电流的产生和导线没关系，只和导线的运动有关。

7. The conventional teachings would suggest that the above-discussed electric current flow was a result of electron flow in the conductor and that nothing came from the magnetic field. Also, conventional teachings states that the magnetic lines of force are imaginary, consisting of Potential Energy and no Kinetic Energy. [This claim was believed to be justified because no current flow was observed when the conductor was motionless in a magnetic field. There is no merit to this position when one

knows that one can vigorously move a conductor parallel to magnetic lines of force and no current flow will occur.]

传统的教学会说上面的讨论的电流是电子在导线中流动的结果，和磁场没多少关系。另外，传统教学规定磁力线是想象出来的，只有势能没有动能。【这种说法被相信是因为导线在磁场中不动时没电流被观察到。这是没有任何价值的，因为当一个人猛烈的平行于磁场线移动一个导线时也没电流产生。】

注：有点电流产生和导线运动也没关系的意思。如果电流是动能转化来的，为什么要在磁场中，为什么还要有方向的运动。

8. As I studied the above facts of Faraday's Generator, I concluded that the conventional teachings of No. 7 above were totally incorrect and that such a conclusion completely ignores the known facts presented by Faraday's Generator.

当我学习到上述法拉第的电机的事实，我得出了一个结论，以上 7 种传统学说都是不正确的，这些学说完全忽视了法拉第的电机中出现的现象。

9. Facts 1-6 above clearly proved to me that a magnetic field consists of:

上面 1-6 的事实清楚的证明磁场构成如下：

A. Particles which have mechanical characteristics. I asked myself, "How else could these particles 'know' which way to travel and why else would the direction of current flow be so dependent upon the magnetic field and totally independent of the conductor itself?"

有力学运动特性的微粒。我问自己，“这些微粒怎么‘知道’向哪条道运动，为什么电流方向这么依赖于磁场而不是导体本身？”

B. Particles moving at the speed of light within the magnetic field. The facts prove to me that one did not impart the velocity of light to electric current flow by moving a conductor slowly through a magnetic field. Rather, the facts demonstrated that the resulting electric current flow consisted of an entity which already traveled at the speed of light. The slow movement of conductor at right angles to that entity had simply mechanically deflected the particle from its normal path. [Such action is similar to that of a bullet being deflected by hitting a metal plate or body of water at the proper angle which results in the bullet being deflected from its original path.]

微粒以光速在磁场中运动。这些事实证明电流的光速运动是通过导体缓慢通过磁场产生的。这些事实证明电流由已经以光速运动的实体组成。导体相对这种实体在垂直方向的运动使微粒偏离了它们原来的方向。【这样的运动和子弹通过在正确的角度撞击金属盘子或水体被偏移一样，结果是子弹从原来的路径偏移】

注：意思很明显，电流是被偏移了的一种实体，这种实体本来以光速运动，我们只是改变了它们的方向。

However, I was still puzzled. I asked myself, "Why did the up and down motion of the deflecting conductor produce opposite-direction deflection of this mechanically-natured particle which moved at the speed of light? Why did the deflection reverse when the magnet was flipped over 180°? And why, when the conductor moved parallel to these mechanically natured particles (which were moving at the speed of light), was no current flow produced?" This latter question indicated to me that no proper deflection of the particles occurred in the mechanical position of force of the conductor.

然而，我依然困惑。我问自己，“为什么导体上下运动会使这种以光速运动的机械粒子产生相反的偏移方向。为什么当磁场翻转 180°偏移方向相反了？为什么当导体平行于这些微粒（以光速运动）运动时没有电流产生？”这些之后的问题指示给我，在导体的力的位置没有合适的微粒偏移发生。

Also, I asked myself, "When the conductor was motionless in the magnetic field (consisting of particles with mechanical characteristics and moving at the speed of light), why was no current flow produced?" This observation indicated that there was no proper deflection of the particles occurring in the mechanical position of the conductor.

同时，我问自己，“当导体在磁场（由有力学特性的以光速运动的微粒组成）中没有运动时，为什么没有电流产生？”这个观察指明，在导体的力的位置没有真正的微粒偏移发生。

10. Summation of my thoughts in the early months of 1965:

10.1965 年前几个月的总结：

Faraday had invented an important invention - the electric generator - but he had invented an inefficient invention because one always obtained less energy from a system than the energy put into that system: yet, the facts clearly showed that the system consisted of an orderly flow of Kinetic Energy. This Kinetic Energy consists of a mechanically-oriented particle which moves at the speed of light. Therefore I knew that in order to construct the proper technological mechanism which could utilize this energy, I must simply understand the essence of the entire system.

法拉第已经发明了一种重要的发明-发电机-但他也发明了一种无效率的发明，因为总是从系统中得到的能量比输入系统的少：但是，事实证明系统由有序流动的动能组成。这种动能由以光速定向运动的微粒组成。因此我知道，为了构建能正确利用这种能量的科学装置，我必须理解整个系统的本质。

In addition to making my living by other successful inventions, the next three years consisted of thousands of hours of testing, studying, and thinking to search for the truth concerning the nature of this mechanically- oriented particle. During this time, the same question dominated my thoughts: How did the particles of a magnetic field "know" which way to travel? In retrospect, the answer is extremely simple, but seemed very difficult to me at the time since I had never taken a physics course and had been teaching myself many varied subjects.

除靠另外一个发明谋生外，以后的三年我用了几千个小时来实验、学习、思考，研究关于这种机械粒子的的原理。在这段时间，同一个问题在困扰着我：磁场粒子如何“知道”走哪个路径？回想起来，答案是如此简单，但似乎对我来说太难了，因为我从没有上过物理课也没有自学那么多科目。

At this time in my life, I began to work on another invention consisting of a flywheel which acted as a "mechanical storage battery" for a bicycle. This flywheel caused the bicycle to automatically react as a "wheelie." Such "stored mechanical energy" within the flywheel suggested to me the stabilizing influence of a gyroscope. I then became fascinated with understanding the essence of the gyroscope and thereafter I learned the answer to the questions dominating my thoughts concerning the explicit, mechanical characteristics of the particles comprising a magnetic field and traveling at the speed of light.

我生命里的这段时间，我开始研究另一个发明，它由一个飞轮组成，就像一个自行车的“机械存储电池“。飞轮引起自行车自动产生一些特技反应。这些飞轮中“存储的机械能”暗示我陀螺仪的稳定影响。我之后沉迷于对陀螺仪本质的理解，之后这找到了我一直关心的问题的答案，关于以光速运动的组成磁场的粒子的力学特性。

注：可以看陀螺仪的一些特性视频，很神奇。

11. These particles consist of a gyroscopic mechanical action which can be operationally (mechanically) understood and predicted! Let the following facts prove or disprove this Theory:

这些粒子以陀螺仪方式运动，这可以用于真实的理解和预测一些事！这下面的事实证明或推翻这个理论：

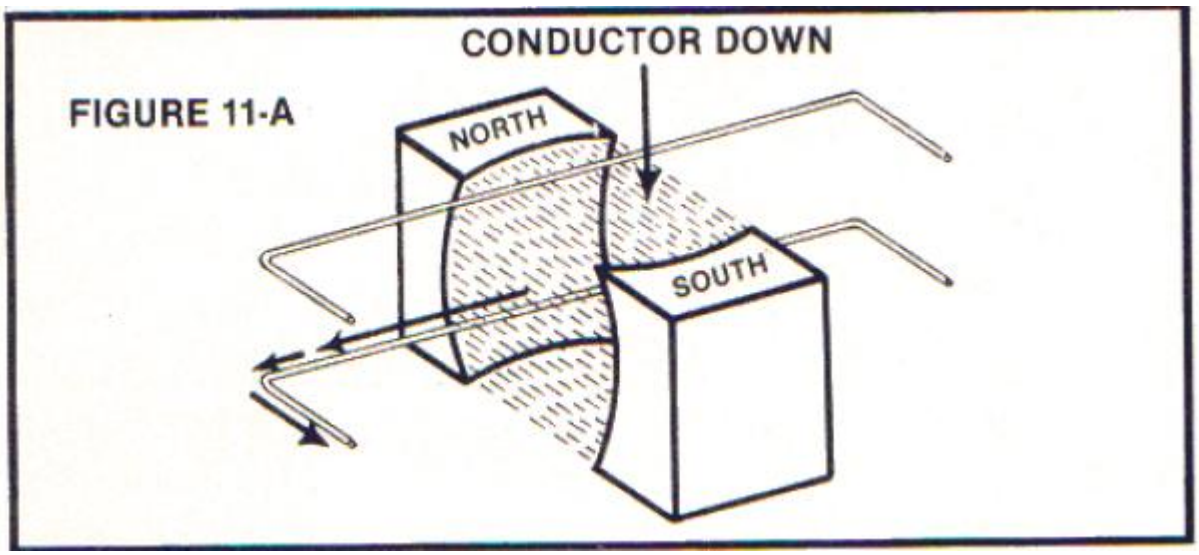


Figure 11-A Move a conductor down at a right angle to a magnetic field and the current flow moves left.

图 11-A 在正确的角度向下移动一个导体，产生向左的电流。

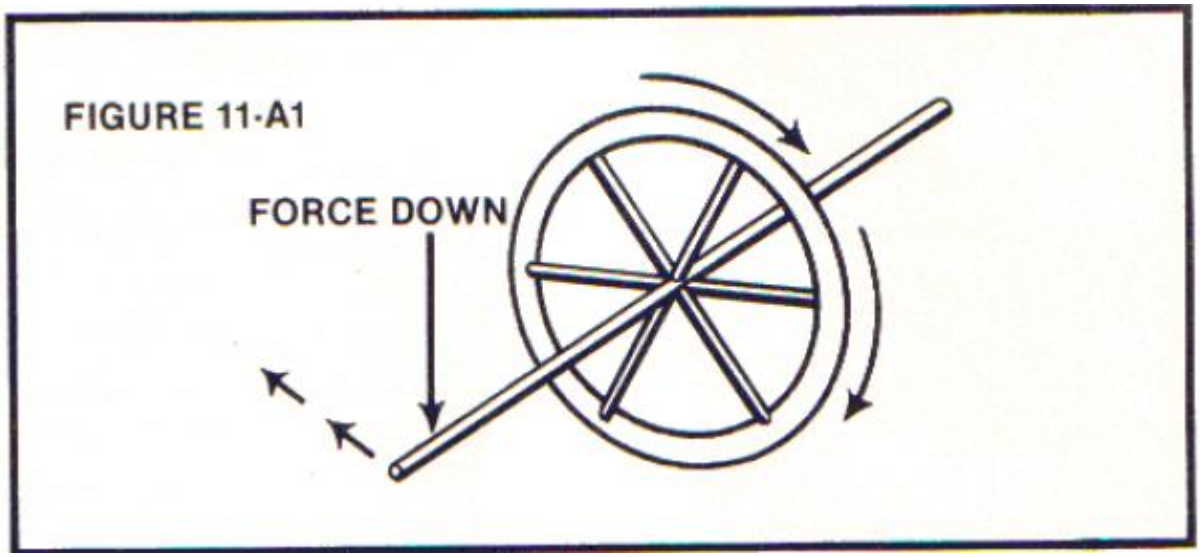


Figure 11-A1 Apply a downward force to the axis of a spinning gyroscope and it will pivot at a right angle to the force (in this case pivot left). Now imagine that this gyroscope has a forward direction at the speed of light.

图 11-A1 给个旋转的陀螺仪的一端一个向下的力，它会在垂直于力的方向在枢轴方向进动（在这里是向左移动）。现在想象这个陀螺仪以光速向前运动。

THE ANALOGY OF THE ABOVE TWO EXAMPLES IS SCIENTIFICALLY EXACT!

类似上面两个的例子同样科学精准!

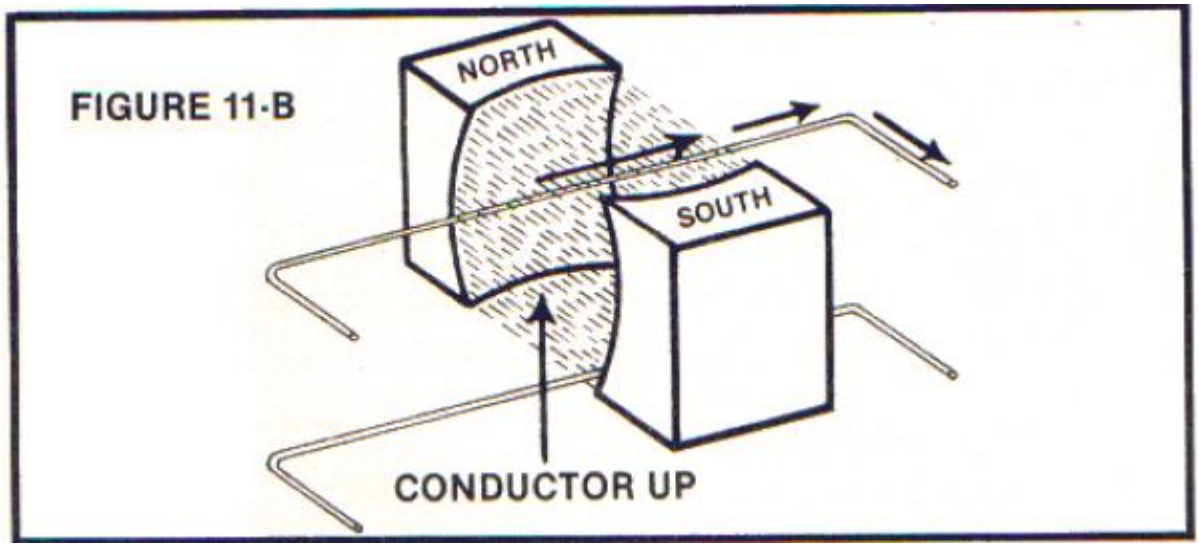


Figure 11-B Move the conductor "up" at right angles to the magnetic field and the current flows right and opposite to Figure 11-A above.

图 11-B 垂直于磁场区域向上移动导体，电流向右流，和图 11-A 相反。

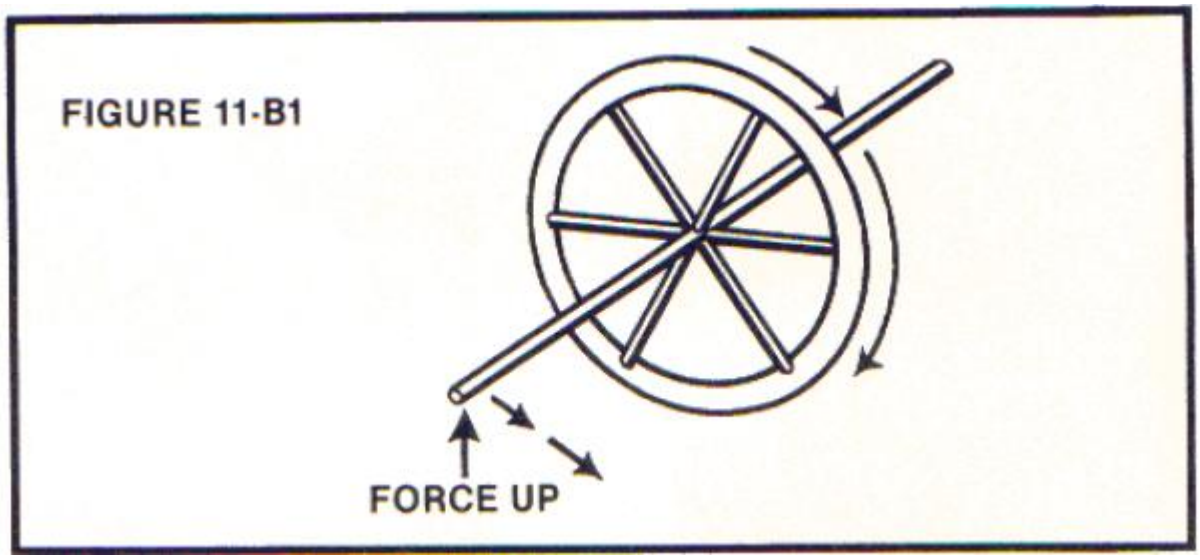


Figure 11-Bl Apply an upward force to the axis of the spinning gyroscope and it will pivot at right angles to the force. In this case, the gyroscope pivots right and opposite to Figure 11-A1 above. Now imagine that this gyroscope has a forward direction at the speed of light.

图 11-B1 给个旋转的陀螺仪的一端一个上的力，它会在垂直于力的方向在枢轴方向进动（在这里是向右移动）。现在想象这个陀螺仪以光速向前运动。

AGAIN, THE ANALOGY OF THE ABOVE TWO EXAMPLES IS SCIENTIFICALLY EXACT!

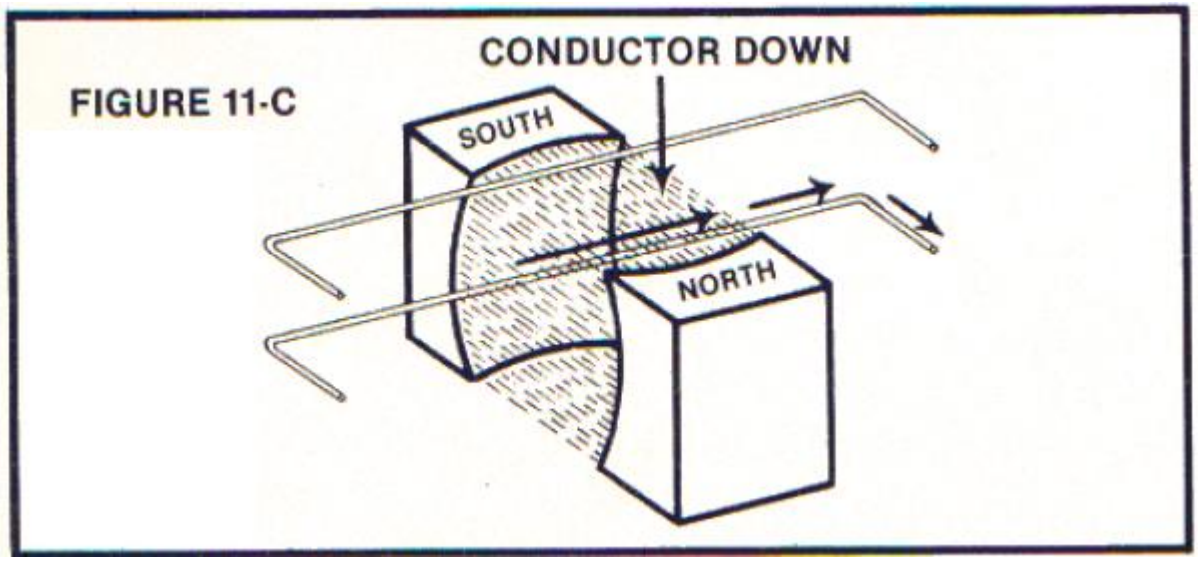


Figure 11-B Flip the magnets over 180° and repeat the actions of Figure 11-A above. The current flow direction will be right and opposite to that of Example 11-A even though the force direction is the same.

图 11-B 对调磁场方向重复图 11-A 中的动作。电流方向向右，和 11-A 相反，虽然力的方向一样。

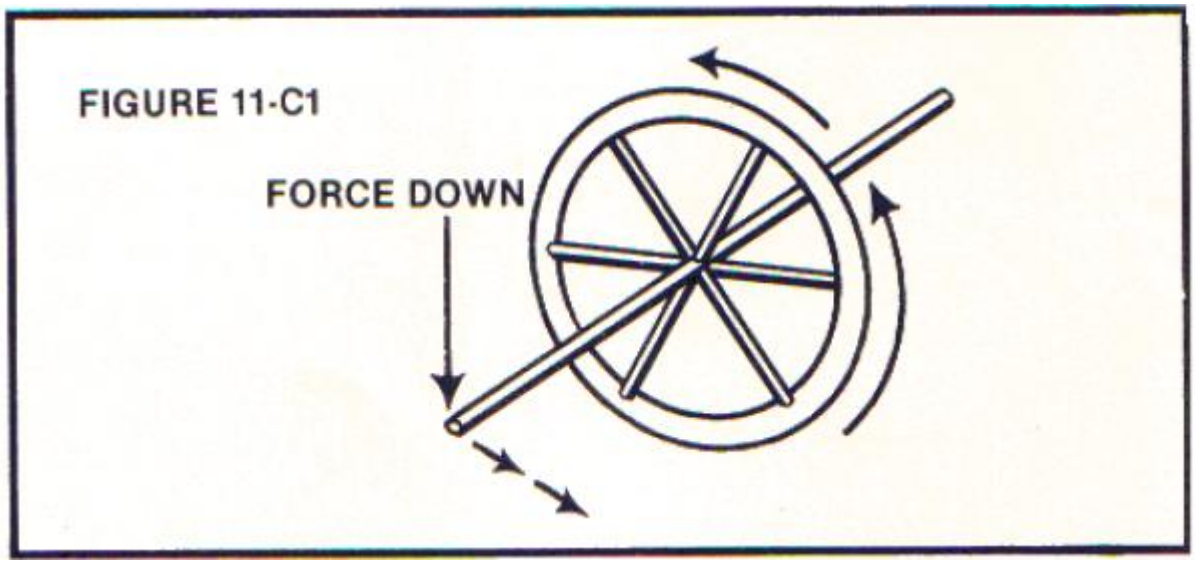


Figure 11-C1 Flip the spinning gyroscope over 180°. Repeating the actions of Figure 11-Al above, the gyroscope will pivot at right angles to the force, but will now pivot right and opposite to that of Figure 11 –A1 above, even though the force direction is the same. Now imagine that this gyroscope has a forward direction at the speed of light.

注：陀螺仪对调方向，进动方向变得相反。其实是旋转方向变了。

AGAIN, THE ANALOGY OF THE ABOVE TWO EXAMPLES IS SCIENTIFICALLY EXACT!

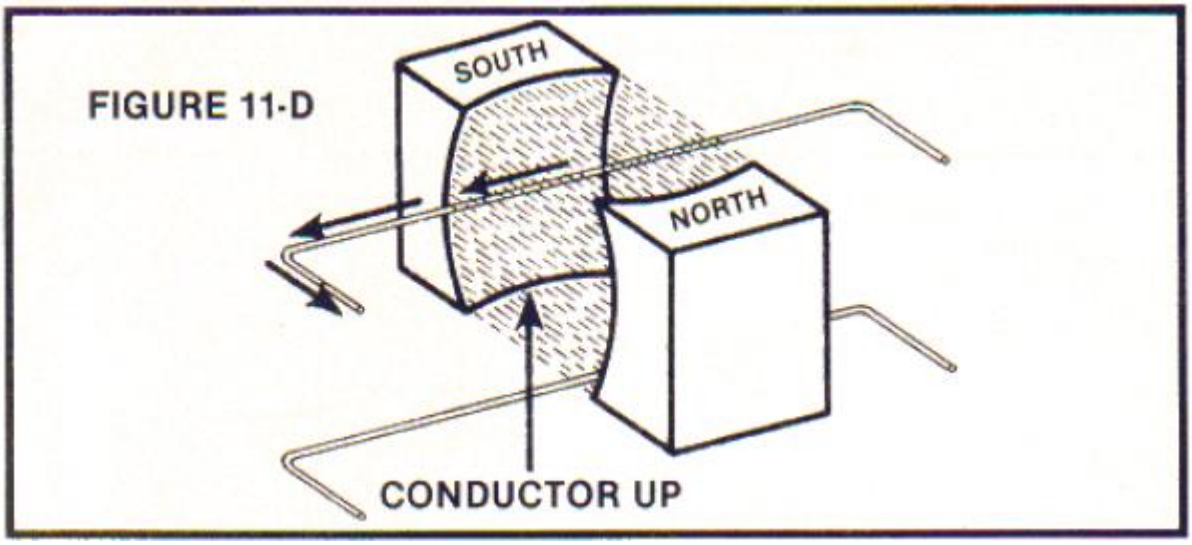


Figure 11-D Repeat the actions of Figure 11-B and the current flow will be left and opposite to Figure 11-B even though the force direction is the same.

图 11-D 重复图 11-B 的运动，电流将向左流动，和图 11-B 相反，即使力的方向一相同。

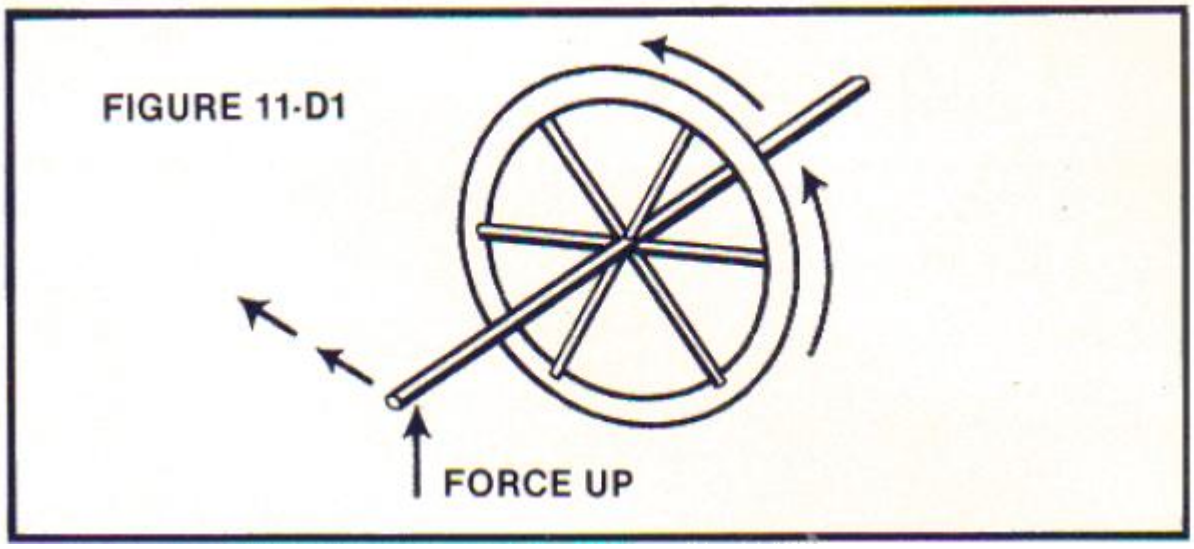


Figure 11-D1 Repeat the actions of Figure 11-Bl: the gyroscope will pivot at right angles to the force, but will now pivot left and opposite to Figure 11-B1 even though the force direction is the same. Now imagine that this gyroscope has a forward direction at the speed of light.

图 11-D1 重复图 11-Bl 的运动：陀螺仪将垂直于力的方向进动，但将向左进动，和图 11-B1 相反，即使力的方向相同。现在想象陀螺仪以光速向前运动。

AGAIN, THE ANALOGY OF THE ABOVE TWO EXAMPLES IS SCIENTIFICALLY EXACT!

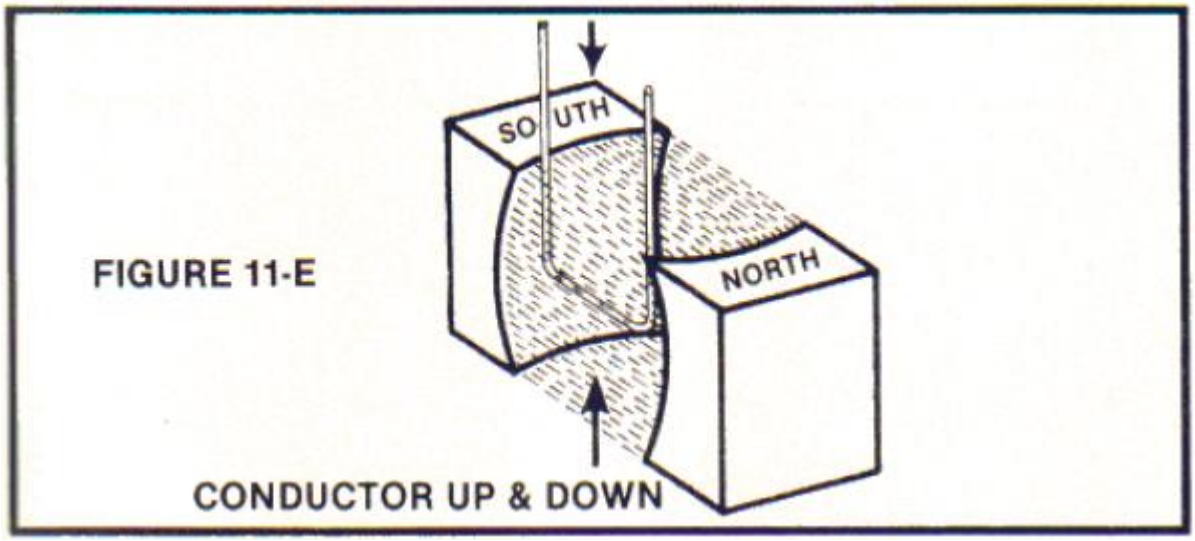


Figure 11-E Move the conductor vigorously "up" and “down" through the magnetic field, maintaining the conductor force parallel to the magnetic tines of force and no current flow will result.

图 11-E 快速的上下移动导线穿过磁场区域，保持导线和磁力线平行，没有电流产生。

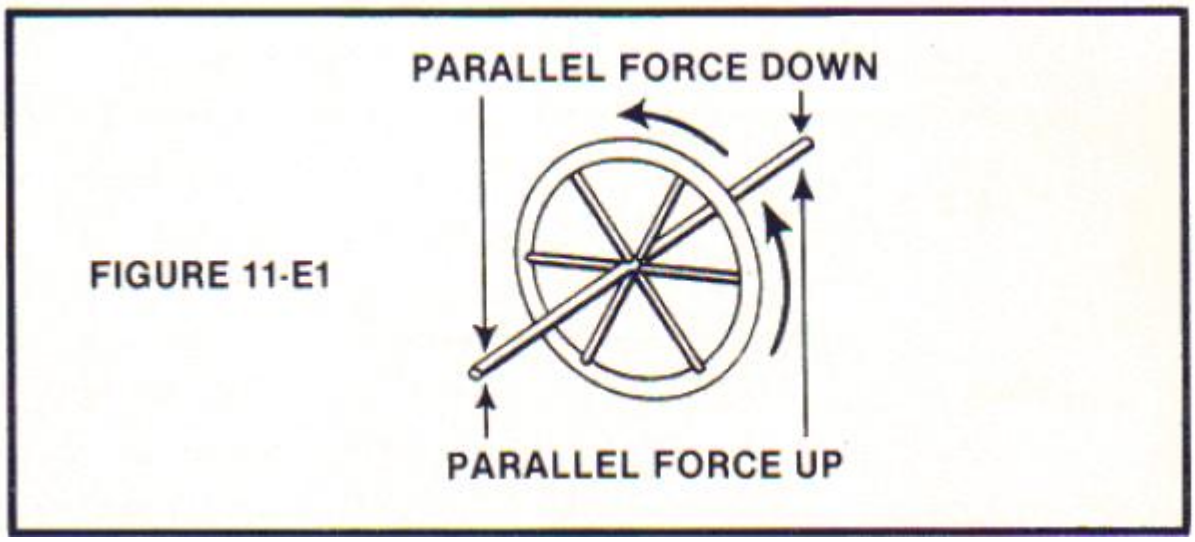


Figure 11-E1 Apply an "up" and "down" force parallel to the axis of the spinning gyroscope. Regardless of how energetically the force is applied, as long as the force remains parallel, the gyroscope will not pivot even though it has a forward motion at the speed of light.

图 11-E1 施加一个平行于自旋陀螺仪轴上下的力。不管力多大，只要力平等于陀螺仪的轴就没有进动的发生，即使它在以光速向前运动。

AGAIN, THE ANALOGY OF THE ABOVE TWO EXAMPLES IS SCIENTIFICA LLY EXACT!

"These particles consist of a 'gyroscopic mechanical action ' which can be operationally (mechanically) understood and predicted!”

“这些粒子以陀螺仪方式运动，可以解释和预言很多事实!”

F. The reason that a stationary conductor in a magnetic field (generated by and consisting of gyroscopic particles spinning and moving at the speed of light) does not produce current flow is very simple. The fundamental Laws for the Mathematics of Probability (Statistics of Large Numbers) states that as many of the gyroscopic particles will pivot left as pivot right due to the random motion of the atoms comprising the conductor. Such action causes a cancellation effect. The same is true if, from all directions, one randomly applies a force to the axis of a spinning gyroscope. It simply will not pivot if the random forces are fast.

在一个磁场（由的陀螺仪式的粒子以光速旋转和运动产生）中一个静止的导体不产生电流的原因很简单。统计学说明大量的陀螺仪式粒子将向左或右进动，归因于导体中原子的无规则运动。这种运动会抵消效果。如果从各方向施加力到旋转陀螺仪的一端也是一样的。如果随机的力很快，它将不会进动。

AGAIN, THE ANALOGY OF THE ABOVE TWO EXAMPLES IS SCIENTIFICALLY EXACT!

G. When one brings a conductor "down" or "up" at right angles to a magnetic field, the random motion of the atoms within the conductor does not affect the system because there is a general drift direction of the "up” and "down" force applied to the gyroscopic particles comprising a magnetic field. This effect is similar to an airflow consisting of gas molecules in random motion within the airflow, but also possessing a general drift direction which will apply a force to a windmill, etc. If the airflow ceases, however, the windmill will not turn even though the molecules of gas - while still moving at high velocities - are nonetheless in a random motion which cancels the force applied to all sides of the windmill.

当相对于磁场在一个正确的角度上下移动导体时，导体内的无规则运动的原子不影响整个系统，因为一个大致的上下方向的力作用于组成磁场的陀螺仪粒子。这种效果和气流相似，气流由无规则运动的气体分子组成，但一个大致的方向可以带动风车等。然而，如果没有气流风车不会转动，即使气体分子依然以很高的速度在运动，但无规则的运动会抵消作用于风车的作用力。

The same effect is true if one applies a random force to the axis of a gyroscope. If the random force has a given drift direction of force, the gyroscope will pivot at right angles to that drift directional force.

给陀螺仪的一端一个无规则的力效果是一样的。如果无规则的力有一个大致的方向，陀螺仪将垂直于力的方向进动。

AGAIN, THE ANALOGY OF THE ABOVE TWO EXAMPLES IS SCIENTIFICA LLY EXACT!

At this point in time, the facts I had assembled had convinced me that my initial thoughts in 1965 were indeed correct. A magnetic field does consist of discrete particles which move forward at the speed of light and possess mechanically-identifiable characteristics which are identical to those possessed by a gyroscope. Such characteristics can be mechanically understood and predicted.

这时，我收集到的实事使我深信不疑我 1965 年的想法是正确的。磁场是由不相连的粒子组成，它们以光速运动，有明显的力学特性，和陀螺仪的特性一致。这样的特性可以被力学的理解和预测。

By this time, however, I also mechanically explained other questions which I had conceived regarding the nature of a magnetic field. Questions such as:

这时我同时力学的解释了另一些问题，我设想的关于自然界中的磁场。问题如下：

Why, in a mechanical sense, does a magnet attract and repel other magnets?

在力学的意义上，为什么磁体会吸引和排斥别的磁体?

Why, in a mechanical sense, do electric charges attract and repel?

在力学的意义上，为什么电荷会吸引和排斥?

What is the energy in a magnetic field and what is its source?

磁场中的能量是什么，它们的源头是什么?

Did the energy used in creating a permanent magnet have any bearing upon the strength or energy contained within a magnetic field emitted from the permanent magnet once it was made?

制作永磁体的能量和一但永磁体制作完成而发出的磁场中的能量或力量有关?

12. In the early part of 1965, I eagerly researched the known facts concerning the creation of a permanent magnet. Because I instinctively knew that if the strength of a magnetic field was solely relative to the energy input, then I would know I was incorrect. But if the strength of the magnetic field was independent of the energy input, then I would be even more assured that I was correct.

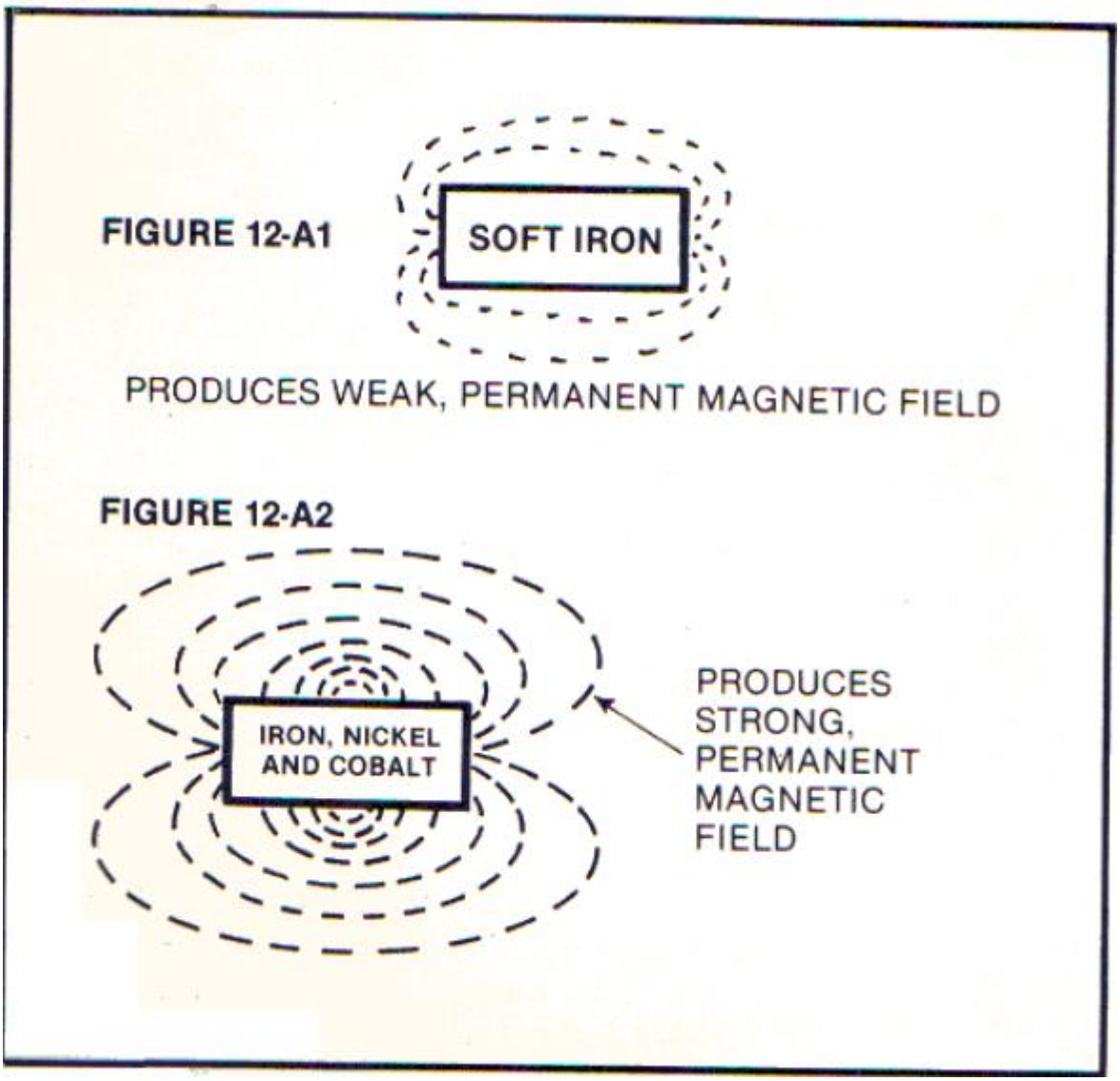
在 1965 年早期，我深入的研究了已知的关于制作永磁体的事实。因为我本能的知道，如果磁场的强度只和输入的能量相关，那么我将是错的。但如果磁场强度和输入能量无关，那么我将更确定的我正确性。

Upon examining the known facts concerning permanent magnets, I again knew I was correct and such facts are listed as follows:

通过上面对关于永磁体已知事实的调查，我又知道我是正确的，这些事实列在下面：

A. For a given energy input into varying materials of identical volume, the generated strength of the magnetic field varies drastically!

对于给定的输入能量和各种相同质量的材料，产生的磁场强度是变化非常大!



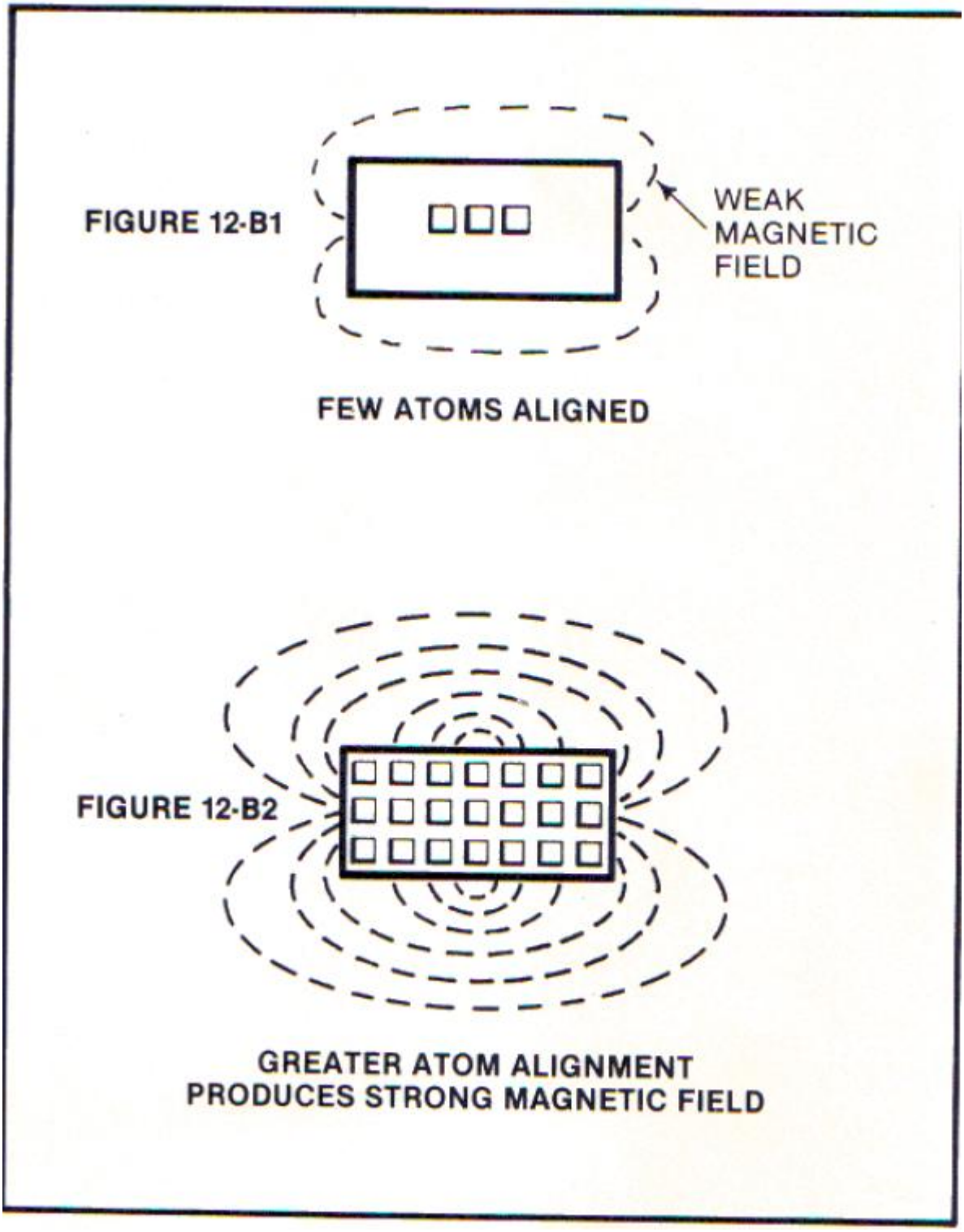
The same electrical energy input created extremely variable field strengths! I therefore instantly knew that the strength of the magnetic field had to be a result of the nature of the atoms comprising the material and not a result of the electrical energy input.

同样的电能输入创建了各种各样的场强！因此我马上知道，磁场强度一定是组成材料原子的自然结果，而不是电能输入的结果。

B. The facts further demonstrated that the strength of the magnetic field was observed to increase as more atoms within the material became aligned!

事实证明磁场强度被观察到和材料的原子数量成线性正相关!

注：材料加一倍，强度加一倍。



FACT B therefore further corroborated FACT 12-A above as being correct.

C. The facts also taught that once the maximum atom alignment of a given material was achieved, then no amount of electrical input would continue to increase the magnetic field of that material! (See Figure 12-B2 above.)

事实同样说明，一旦给定材料的原子完全排序完成，输入再多的电能也不会增加材料的磁场强度!

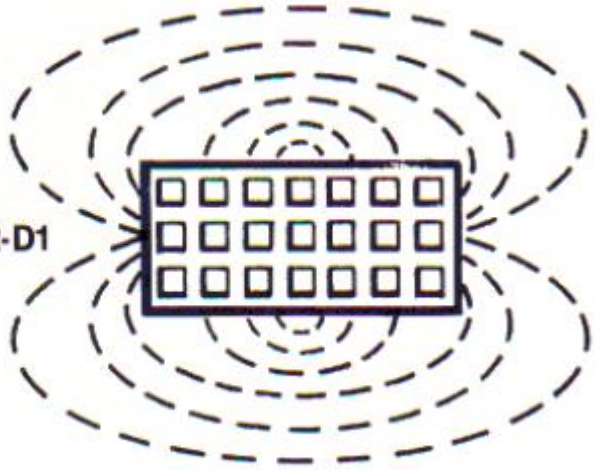
It was obvious to me from this conclusion that the strength of the magnetic field of a given material was not relative to the electrical energy input. Once the maximum atom alignment of a material was achieved, one could increase the energy input 1000 times and there would be no increase in the strength of the magnetic field of the permanent magnet. Therefore, FACT 12-C further corroborated FACT 12-A above.

这个结论明显的告诉我，磁场强度和输入的电能无关。一旦给定材料的原子完全排序完成，输入能量大 1000 倍永磁体的磁场强度也不增加。因此，上面的事实 12-C 进一步证实了 12-A。

D. The facts also taught that if one took a permanent magnet (such as in Figure 12-01 below) which has a strong magnetic field and heated the magnet to its Curie temperature, the magnetic field would virtually disappear! (See Figure 12-D2 below.)

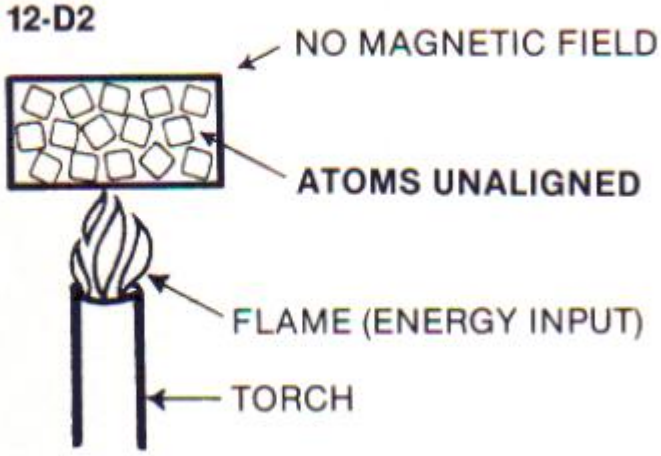
事实同样说明如果一个人将一块有很强磁场强度永磁铁加热到它的居里温度，磁场将消失于无形!

FIGURE 12-D1



STRONG MAGNETIC FIELD PRODUCED
BY GREATER ATOM ALIGNMENT

FIGURE 12-D2



Again, it was obvious to me that the magnetic field disappeared in Figure 12-D2 because the heat input created a random atomic motion and non-alignment within the material. One can clearly see that in Figure 12-D2 one is transferring energy into the system of the magnetic material, i.e., one is not taking energy from the magnetic material and yet the magnetic field virtually disappears.

对我来说这是很显而易见的，图 12-D2 的磁场消失，因为加热使原子无规则运动，材料中没有了排序。可以清楚的看到图 12-D2 中，传入能量到磁体材料系统中，从中没得到磁体材料上的能量，可以磁场消失于无形。

13. The conclusions which I drew from the above FACTS l- 12D clearly proved to me the following:

从上面 FACTS l- 12D 中得到的结论清楚的证明下面的结论：

A. The energy in a magnetic field is the energy which comprises the component parts of the atoms from which the energy comes!

B. The energy in a magnetic field is therefore literally Einstein's Equation of $E = MC^2$!

C. The energy in a magnetic field must be moving in a direction at the speed of light and must also have a gyroscopic spin at the speed of light: herein lies the mechanical essence of E = MC2 !

A.磁场能量来自原子中的组成部分!

B.磁场中的能量真正的符合爱因斯坦的方程 $E = MC^2$

C.磁场中的能量一定在一个方向上以光速运动，一定是以光速陀螺仪式的快速旋转：这是 $E = MC^2$ 力学的本质!

The Kinetic Energy of a moving particle is $1/2\ MV^2$. If the particle is moving with speed V and also rotating about its axis at speed V, then the total Kinetic Energy is $1/2\ MV^2$ (for forward motion) plus $1/2\ MV^2$ (for the rotational motion [not $1/2\ Iw^2$]) which equals MV^2 . If V is equal to C, then the total Kinetic Energy is equal to MC^2 (Hypothetically, this particle is mathematically an infinitely small entity which, in a literal and mechanical sense, moves laterally and rotationally to generate a gyroscopic [spiral] helix effect.)

运动中的粒子的动能是 $1/2\ MV^2$。如果粒子以速度 V 运动并绕轴线以 V 做圆周运动，总动能是 $1/2\ MV^2$（前进运动）加 $1/2\ MV^2$（圆周运动[不是 $1/2\ Iw^2$]）等于 MV^2。如果 V 等于 C，总动能是 MC^2（假想，粒子是算术无穷小的粒子，在字面和力学意义上，横向旋转运动产生陀螺仪螺旋效果）。

E. The literal and mechanical configuration of a magnetic field is simply a result of the summation of atom alignment within the material from which the magnetic field is generated.

字面和实际磁场的结构只是生成磁场的材料原子排序的总的结果。

F. At this time, I had also mechanically explained why electric charges as well as magnets attracted and repelled. (Conventional teachings only state that "like" magnetic poles repel and "unlike" magnetic poles attract. It is also said that "like" electrical charges repel and "unlike" electrical charges attract. This is a superficial analysis.) The answer to such attraction/repulsion is simple. The gyroscopic spin has a mechanical action which causes the observed results and can be mechanically understood and predicted.

这时，这已经力学的解释了为什么电荷也和磁体一样会吸引和排斥。(传统教学只说“同”极排斥，“异”极相吸。也说“相同”电荷排斥“相异”电荷吸引。这是肤浅的分析。）吸引/排斥的答案很简单。陀螺仪式旋转会产生一种力学行为，这引起观察到的结果并可力学的理解和预测。

E. The same conventional and superficial analysis was also applied to electric charges, i.e., "like" charges repel and "unlike" charges attract. My mechanical explanation concerning electric charges was developed 3/2 years before I understood the gyroscopic composition of magnetic fields. In essence, I mechanically viewed the electric charges as rotating arrows  similar to the mechanics of gear interaction. This enabled me to easily envision and draw the mechanical effects of attraction and repulsion. However, I did not call this mechanical effect of attraction and repulsion a gyroscopic effect since (at that time) I had still not studied gyroscopes. Upon understanding gyroscopes, I instantly understood that the mechanics I had originally drawn for electric charges was a gyroscopic action. The fact that the same mechanical explanation for gyroscopic action explained both magnetism and electric charges made me even more certain of the correctness of the mechanical explanation. [Electric charges consist of millions (plus) of gyroscopic particles and such charges will be discussed in more detail in a later chapter (Sections 29 A-M) discussing gravity.] At this point, you should first intellectually master the concept and mechanical nature of magnetism.

同样传统浅显的分析也用于电荷，“相同”电荷排斥“相异”电荷吸引。我的关于电荷的力学的解释在一年半以前，在我理解磁场陀螺仪式的组成以前。本质上，我力学的把电荷看作旋转的箭头，  和机械中的齿轮运动相似。这

可以让我很容易想象的画出吸引和排斥的力学效果。然而，我没有把这种吸引和排斥的力学效果叫做陀螺仪效果，那时我还没学习陀螺仪理论。自从理解了陀螺仪，我马上理解我原来对电荷描绘的力学是陀螺运动。实际上，对陀螺仪的力学解释同样是磁场和电荷的力学解释，使我更加确信这种力学解释的正确性。[电荷由无数陀螺粒子组成，这样的粒子将在后面讨论重力时详细讨论。]这时，你应该第一时间熟知这个观念和磁性的力学原理。

The following two pages of drawings describe MAGNETS IN REPULSION and MAGNETS IN ATTRACTION, (as well as electrical repulsion and attraction), visually explaining the discussion in 13 A-E. These drawings have been unselfishly produced for me by_ Mr. Evan R. Soule', Jr. (talented artist and teacher). See also the following pages presenting a Technical Description of the drawings. This Technical Description was also unselfishly written by Mr. Evan R. Soule', Jr. from information developed by me, with the purpose being that if Mr. Soule' could understand what I have taught, then as an experienced teacher he could put forth this information so that you, the reader, would also understand.

下面的两页图描述排斥的磁场和吸引的磁场，（同样适用于电荷的吸引与排斥），解释 13 A-E 的讨论。这些图是 Mr. Evan R. Soule', Jr.（天才的艺术家和老师）无私制作的。下面还有图的技术说明。技术说明同样是 Mr. Evan R. Soule', Jr.根据我发布的信息无私的写的，我发布信息带着这样的目的，如果 Mr. Soule'能理解我所说的，那么一个经验丰富的教师能传播这些信息，这样你、读者都将可以理解。

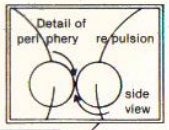
MAGNETIC FIELDS IN REPULSION

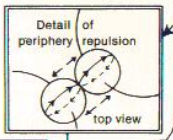
QUALITATIVE REPRESENTATION OF THE KINETIC ENERGY OF A MAGNETIC FIELD: GYROSCOPIC FUNDAMENTAL PARTICLES SIMULTANEOUSLY ROTATING (ON AN AXIS CONSISTING OF A GIVEN "LINE OF FORCE") AT THE SPEED OF LIGHT AND TRAVELING AT THE SPEED OF LIGHT ALONG THESE "LINES* OF FORCE" IN ACCORDANCE WITH EINSTEIN'S EQUATION OF $E=MC^2$

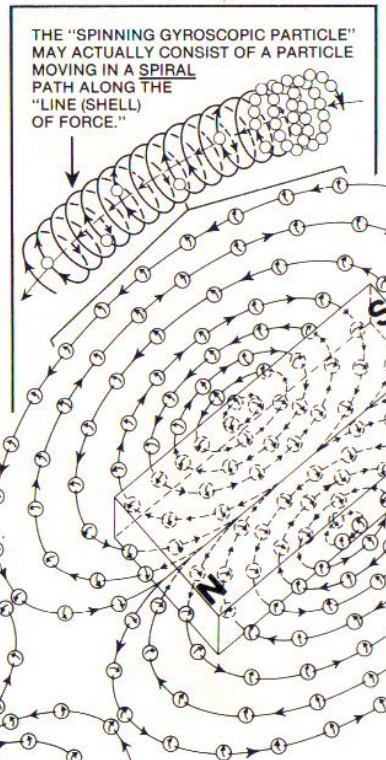
—*ACTUALLY "SHELLS OF FORCE"

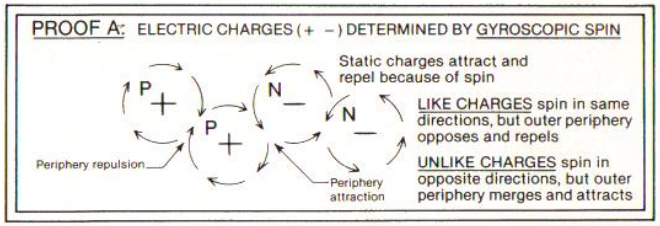
IT IS THE GYROSCOPIC SPIN THAT PLAYS THE MAJOR ROLE OF ATTRACTION AND REPULSION IN MAGNETIC FORCES (EXACTLY AS SHOWN IN STATIC ATTRACTION AND REPULSION —— SEE "PROOF A")

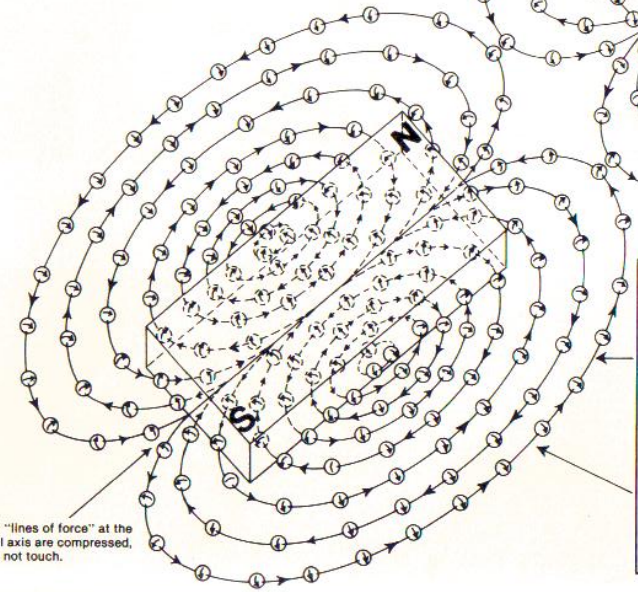
Drawn by Evan Soule', Jr. (New Orleans, LA) based upon the original and copyrighted concepts of JOSEPH NEWMAN.

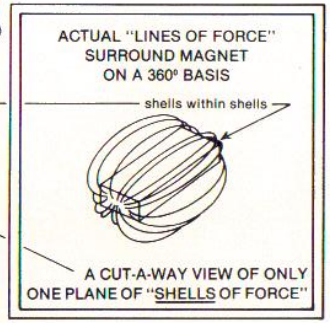


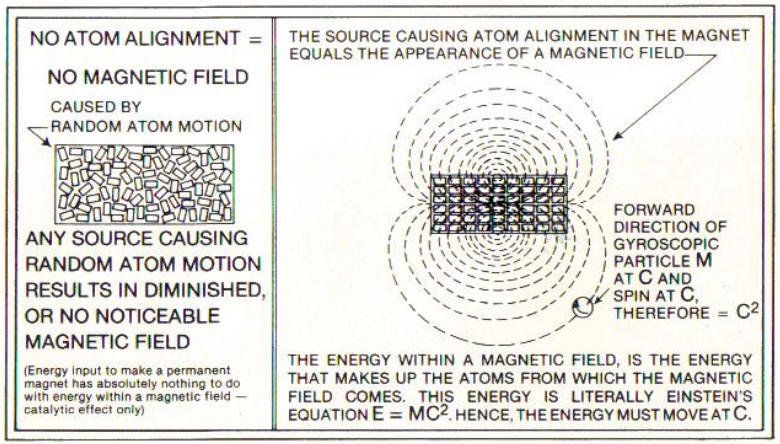












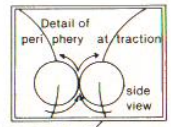
MAGNETIC FIELDS IN ATTRACTION

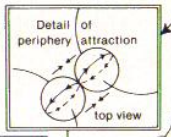
QUALITATIVE REPRESENTATION OF THE KINETIC ENERGY OF A MAGNETIC FIELD: GYROSCOPIC FUNDAMENTAL PARTICLES SIMULTANEOUSLY ROTATING (ON AN AXIS CONSISTING OF A GIVEN "LINE OF FORCE") AT THE SPEED OF LIGHT AND TRAVELING AT THE SPEED OF LIGHT ALONG THESE "LINES* OF FORCE" IN ACCORDANCE WITH EINSTEIN'S EQUATION OF $E=MC^2$

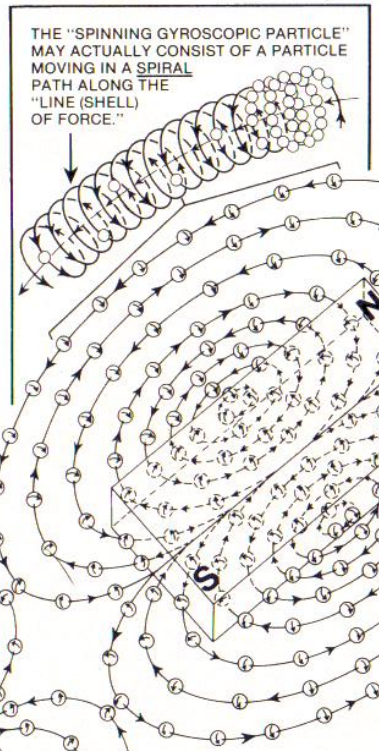
—*ACTUALLY "SHELLS OF FORCE"

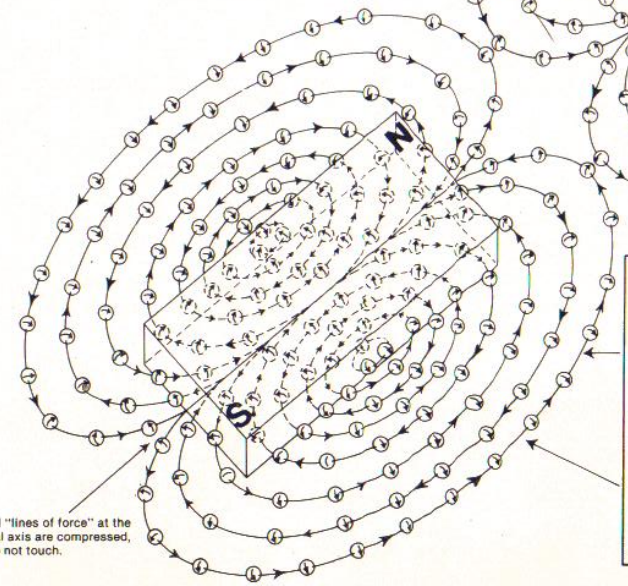
IT IS THE GYROSCOPIC SPIN THAT PLAYS THE MAJOR ROLE OF ATTRACTION AND REPULSION IN MAGNETIC FORCES (EXACTLY AS SHOWN IN STATIC ATTRACTION AND REPULSION —— SEE "PROOF A")

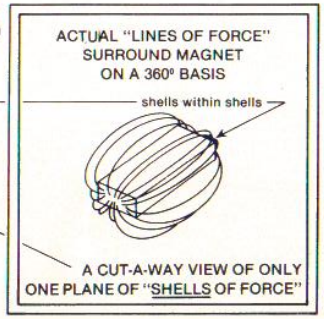
Drawn by Evan Soule', Jr. (New Orleans, LA) based upon the original and copyrighted concepts of JOSEPH NEWMAN.

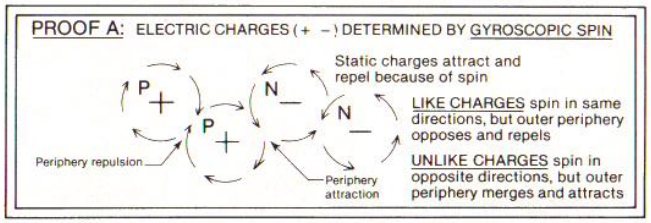


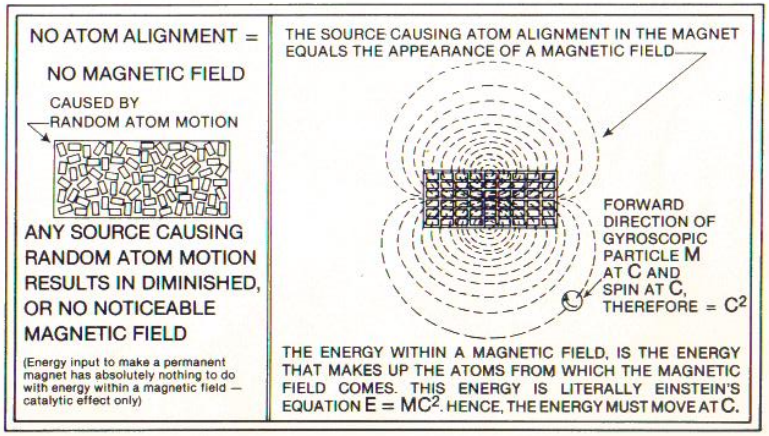












第 3 章 两张图的解释

Chapter3 TECHNICAL DESCRIPTION OF DRAWINGS

注：图是第二章最后的两张图，本章分开进行解释。

"... it is Impossible for anyone to begin to learn what he thinks he already knows."
- Epictetus
开始学习如何看待已知的知识对任何人都是重要的。
-埃皮克提图

Described above are the technical drawings for one aspect of Joseph Newman's theories. The two drawings - MAGNETIC FIELDS IN REPU LSION and MAGNETIC FIELDS IN ATTRA CTION -describe three bar magnets in a three-dimensional configuration surrounded and penetrated by circulating gyroscopic particles, each of which spins while traveling upon "lines (shells) of force (direction)" that consecutively alternate in opposite directions. [The difference between the two drawings is that the central magnet is reversed.]

上面描述的是约瑟夫-纽曼的理论一个方面的技术绘图。两张图-排斥的磁场和吸引的磁场-描述了三个磁条在三个维度被陀螺粒子环绕和穿透的形态，每个粒子在“力（方向）线（外壳）”上旋转前进，在连接交替相反的方向上。【两张图的不同在于中间的磁条是相反的。】

According to Mr. Newman, these gyroscopic particles are the smallest particles known and comprise all atoms within the universe. The technical drawings are qualitative in nature; quantitatively, there are trillions of such gyroscopic particles flowing in the described paths to generate the magnetic field. Although sub-atomic particles will be shielded by lead, the effects of magnetic fields can be observed through lead shielding. According to Mr. Newman, this is one proof that these particles are the most fundamental particles known.

按纽曼先生所说，这些陀螺粒子是已知的最小的粒子，组成宇宙中的所有原子。技术图实际是定性分析；定量来说，有数万亿的陀螺粒子在描述的路径中流动来产生磁场区域。虽然小于原子的粒子会被铅屏蔽，但磁场的效果可以通过铅屏蔽观察到。(注：可能不是铅，自己翻译 lead）按纽曼先生所说，这是这些粒子是已知的最基础的粒子的证明。

These drawings represent the first time in the history of physics that there is presented in an explicit pictorial fashion (via the concepts innovated by Mr. Newman) a precise, mechanical explanation of the phenomena of magnetism and the principle of "action at a distance."

这些图第一次在物理发展史上出现，以最直接的绘图方式（凭借纽曼的创建观念）展示了一种关于磁现象精确的力学解释和超距作用的原则。

In his researches on magnetism, James Clerk Maxwell (as well as Michael Faraday) explicitly described the lines of force surrounding a magnet as kinetic, mechanical energy. (Maxwell called electromagnetism "matter in motion. ") This description by Maxwell has been forgotten in the past 100 years. While Maxwell could not explain in detail the action of a magnet, he did recognize that such action is mechanical in nature.

关于他对磁的研究，麦克斯韦（和法拉第）明确的叙述了磁体周围的力线是活跃的机械能。(麦克斯韦把这叫做运动的电磁物质）麦克斯韦的这个解释已经被人们遗忘了 100 年。虽然麦克斯韦没能详细解释磁的运动，但他认识到这种运动实际上是机械运动。

As one passes a conductor wire in front of and across the end of a bar magnet , one will observe the current to flow first in one direction , then become neutral, then reverse itself and flow in the opposite direction. This occurs due to the nature of the flow of the gyroscopic particles as they flow from each end of the bar magnet (see drawings above). On one side of the south (S) end of the bar magnet, for instance, the particles flowing in and out along the "lines of force " spin "up, " while on the other side of the same south end, the particles flowing in and out along the "lines of force" spin "down." A spinning gyroscope will move at right angles to the force acting upon it; hence, as the gyroscopic particles encounter the particles composing the conductor wire, they move "up" or "down" the conductor (at right angles to the direction that they first encounter the conductor) .

当一个人拿一个导线从磁体的前端移动到尾端，将会观察到电流向一个方向流动，之后变没，最后在相反的方向流动。这归因于陀螺粒子的流动原理，它们从条形磁体的每个极的末端流出（看上面画的图）。例如，在磁体的南极，粒子沿“力线”“向上”旋转进出，同时和南极相同的另一端，粒子沿“力线”“向下”旋转进出（这里向上向下感觉翻译不对）。一个旋转的陀螺仪将垂直于力的方向进动；因此，当陀螺粒子与组成导线的粒子碰撞，它们在导体中“上”“下”运动（垂直于最初碰撞导体的方向）。

Mr. Newman indicates that it is principally the spin of the gyroscopic particle (and not the direction of flow for the gyroscopic particles along the "lines of force") that determines magnetic repulsion and attraction. The interaction of the peripheries of the particles actually effects such repulsion and attraction (see PROOF A). Although the drawings depict space between the particles flowing in a given "line of force," in actuality the particles are more like individual spirals upon a strand of beads in the shape of a helix which results in a gyroscopic action -each particle “bumping against the next." [According to Mr. Newman, between each particle there is a very small amount of space created by the electromagnetic force surrounding each particle.]

纽曼先生指出，陀螺粒子的自旋主要（而不是陀螺子所沿“力线”的流动方向）决定了磁的排斥和吸引。边缘的粒子的交互实际影响着排斥和吸引力（看 PROOF A）。虽然图中描绘了给定“力线”中流动的粒子之间的空间，实际上粒子更像独立的螺旋上升的一串螺旋结构的小珠子，结果是陀螺仪方式的运动，每个粒子“和下个粒子相碰”。[根据纽曼先生所说，每个粒子之间有一个由粒子周围电磁力创建的很小的空间。]

As the drawings depict, the actual "lines of force" are really shells of force which envelop the magnet s as discrete shells of gyroscopic particles which lie concentrically within other shells. These "lines of force" (as depicted in one plane on the drawings) or shells of force (in actuality) travel (rotate) in opposite directions relative to one another. The effect of such motion is to place the peripheries of respective gyroscopic particles (from one "line of force" to the next) at opposition (or repulsion) to one another and consequently keep each "line of force" separated from each adjoining (concentric) "line (shell) of force."

如图所绘，真实的“力线”实际上是包围磁体的力的外壳，集中在外壳上的陀螺粒子组成的独立的外壳。这些“力线”（如图中描绘的）或力的外壳（真实情况）相对于彼此在相反的方向运动（旋转）。这种运动的效果将独立的陀螺粒子（两条“力线”中的粒子）的边缘和其它粒子相反（或排斥）放置，因而保持每条“力线”独立于毗连（同轴）的“力线（壳）”。

注：NS 发出的力线是排斥的。

In addition, there are as many "lines of force" emanating from each end of the bar magnet as there are atoms aligned magnetically across the width and height of the N and S ends of the magnet. Because of the large size of iron filings relative to the sub-atomic size of the gyroscopic particles, the particles within the "line of force" congeal l clumps of the filings into (via the naked eye) a relatively few number of such lines. Which more finely-ground iron filings, more "lines of force" would become visible to the human eye.

另外，从磁条两端发射的“力线”和穿过磁体 N 极和 S 极宽高的磁性排列的原子一样多。因为相对于比原子还小的陀螺粒子铁屑有更大的尺寸，“力线”中的粒子会凝结到数量相对较少的几丛铁屑上。铁屑越细，越多的“力线”会变的可见。

注：意思是“力线”的数量是一定的，凝结到铁屑上的多别的地方的就少了，铁屑是力线的一表示，铁屑越小可以显示的力线越多。重点是力线数量一定，铁屑可以改变力线的稠密度。

Each particle (M) travels along the "line (shell) of force" at the speed of light (C) and also individually spins at the speed of light (C). Consequently, such motion results in energy (E) since $E = MC^2$.

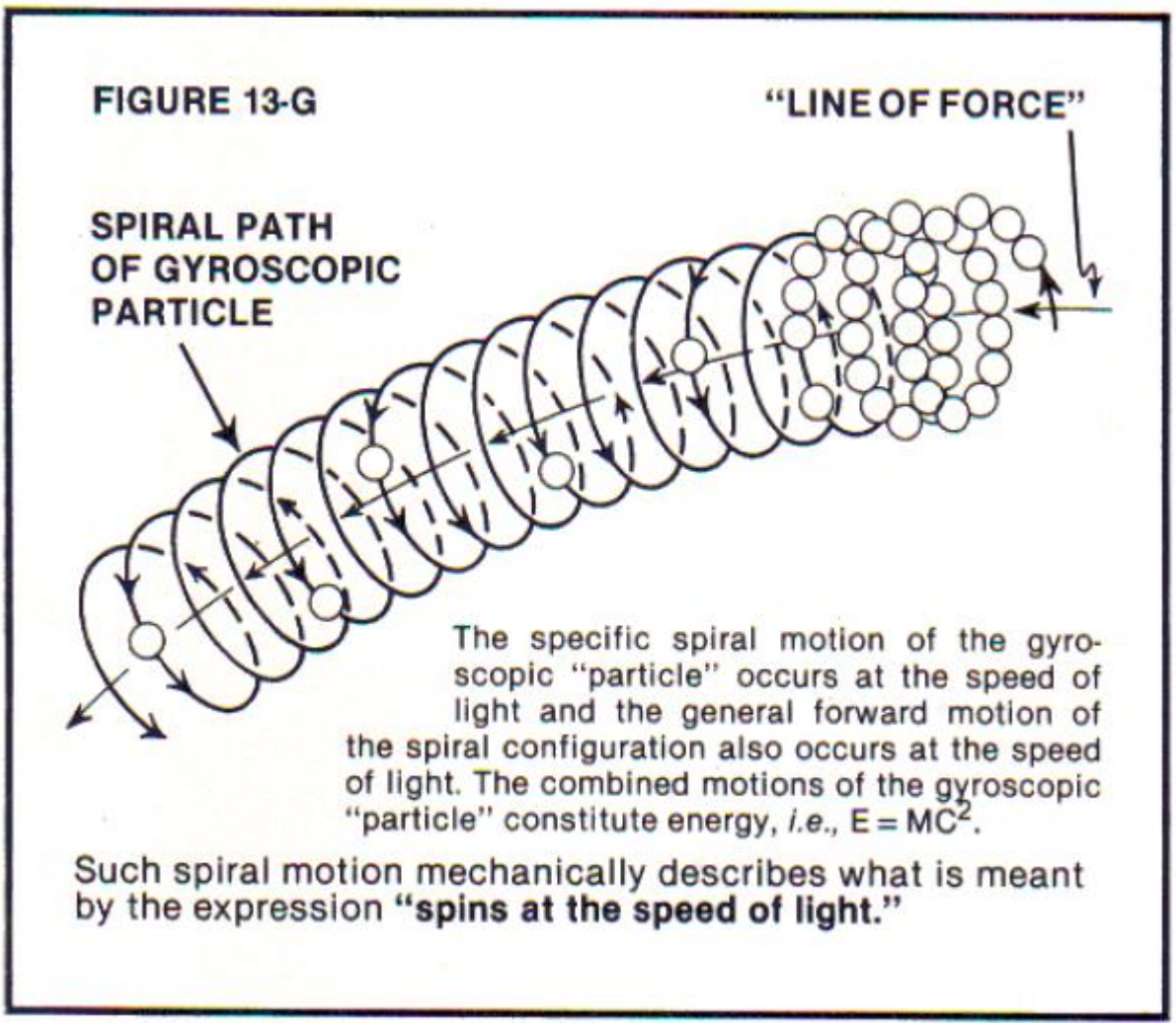
每个粒子沿“力线（壳）”以光速运动，并独立以光速做旋转运动。因此，运动的结果是能量 $E = MC^2$。

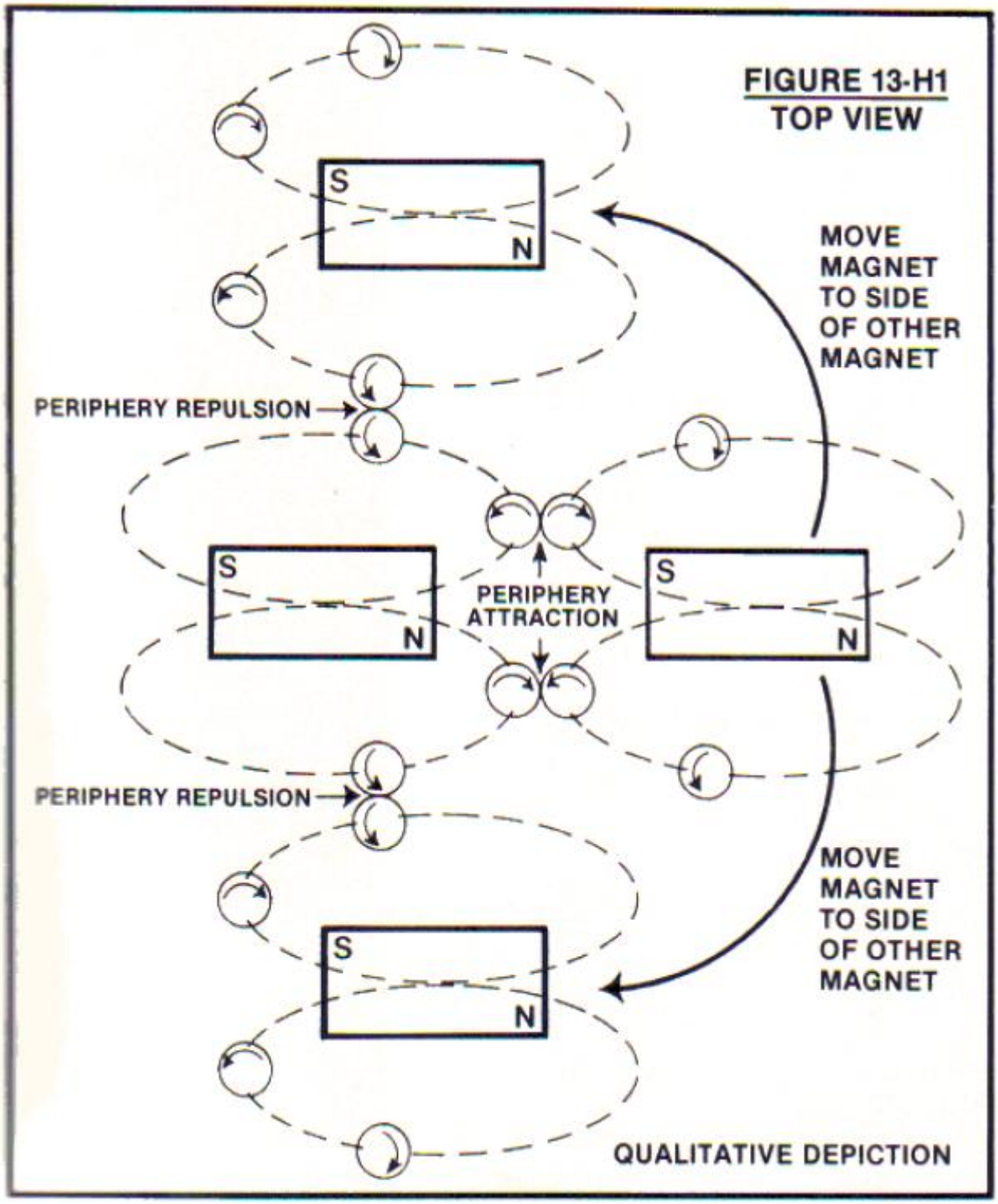
It should also be noted that, based on the theories of Mr. Newman, I constructed three-dimensional models of two bar magnets to study how the gyroscopic panicles interact. Using simple Styrofoam (for the bar magnet), wire (for the "lines of force"), and wooden beads (for the gyroscopic particles), I was able to construct these models as shown in the technical drawings. (This is only an analogous construction. Mr. Newman does not state there is a solid particle spinning on its axis as it moves, but probably is a particle moving [in effect, spinning] in a circular [spiraling helix] configuration at the speed of light

and moving forward at the speed of light (within the general helix action); such combined motion equals c2.] (See Figure 13-G.)

基于纽曼先生的理论，我构建了两个条形磁体的三维模型来学习陀螺粒子如何交互。用简单的聚苯乙烯泡沫塑料（制作磁铁），金属丝（制作“力线”），和木制小珠子（制作陀螺粒子），我能够构建这些技术图中的模型。（这只是一相相似的模型。纽曼先生没有说是绕轴心的固体旋转运动的粒子，但是可能是一个粒子以环形结构[螺旋型]光速运动[旋转]，并向前以光速运动（伴随螺旋运动）；这样的组合运动等于 c2。）（看图 13-G）

注：对陀螺子的理解很重要，不一定是固体旋转的粒子。

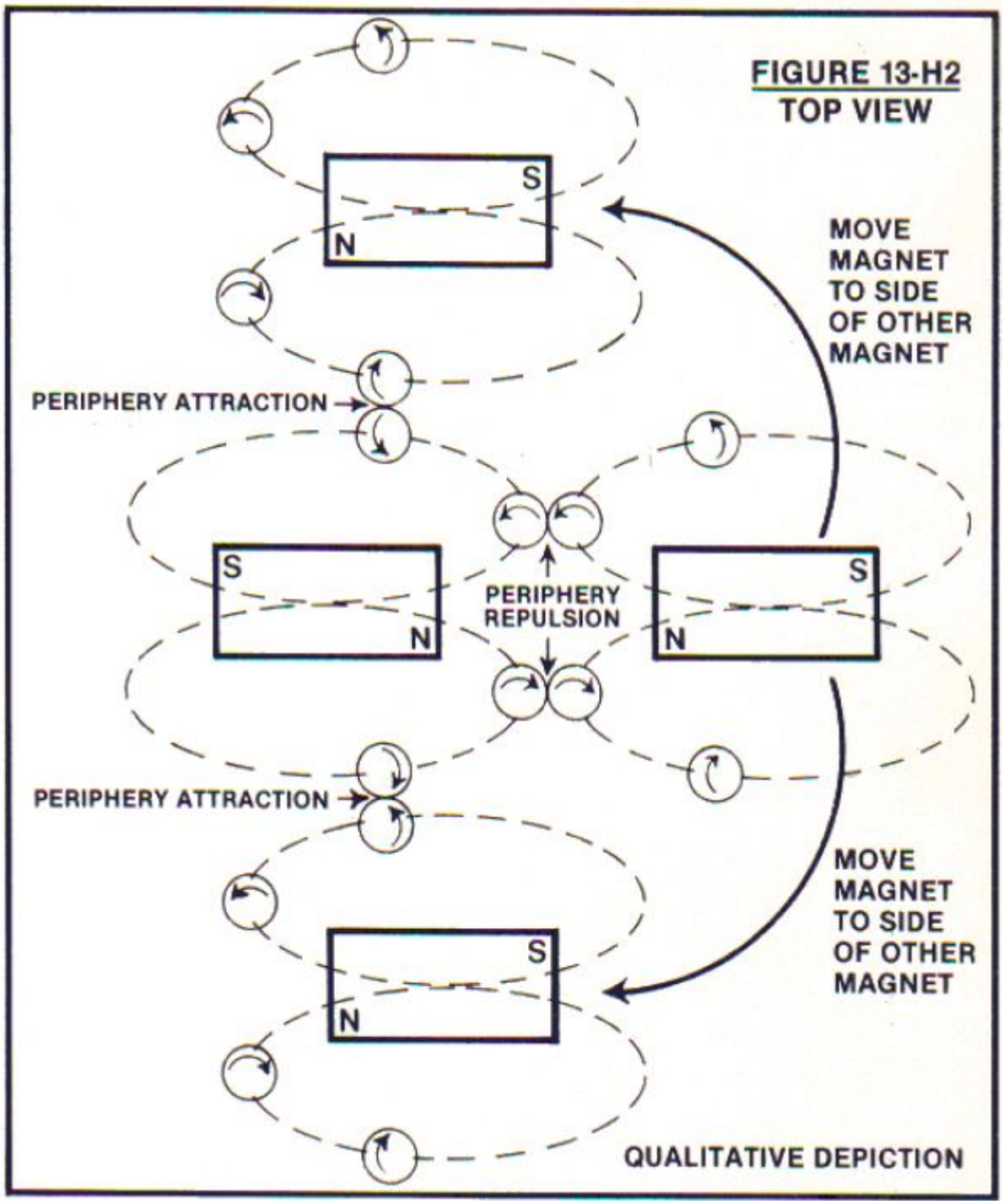




An interesting observation occurred following construction and study of these two models: while the N and S pole faces of two magnets (see Figure 13-Hl) attract when placed directly end-to-end, if one shifts the same faces to the side of one another (keeping them in the same plane), one will notice that the periphery spin of the gyroscopic particles flowing from N and S will interact to repel one another, even though opposite poles normally attract one another in a head on position.

下面的结构和学习这两个模型时发生了一个有趣的观察：当直接首尾相接放置 N 和 S 极面向两个磁体（看图 13-Hl）吸引时，如果移动一个到另一个相同的一面（使它们在同一平面），将会注意到从 N 和 S 流出的边缘的陀螺粒子相互排斥，即使异极一般情况下在头部会相互吸引。

注：看图应该只有两磁条，意思怎么是三个。我实验了，就是两个磁体异极相对，移到不正对时有排斥。



This simple experiment to test the validity of an explanation for a previously unobserved (or if observed, then unexplained) magnetic phenomenon is a powerful corroboration for the rightness of Mr. Newman's theories.

这个前面没有发现（如果发现也没有解释）的磁现象的解释经测试是正确的，这有力的进一步证实纽曼先生理论的有效性。

Similarly, with two like poles (see Figure 13-H2) brought together (N to N or S to S) -while they repel each other when placed head on, the models appeared to indicate that the magnets would attract each other when the ends are placed slightly side to side (alongside one another and overlapping in the same plane.) For this writer, the real test was whether actual magnets behaved in this manner. In testing such magnets, I found that such side attraction (with N to N) and side repulsion (with N to S) was observed exactly as the mechanical descriptions of Mr. Newman would predict and indicate. This simple experiment to test the validity of an explanation for a previously unobserved (or if observed, then unexplained) magnetic phenomena is a powerful corroboration for the rightness of Mr. Newman's theories.

相同的，两个同极（看图 13-H2）放到一起（N 对 N 或 S 对 S）-当它们头对在一起时相互排斥，模型指出当边到边轻放时磁体会吸引（一个在一个侧面，重叠在一个平面）。作者用这两种方式实际实验了这两种磁铁行为。在实验

时，我发现这样的边吸引（N 到 N）和边排斥（N 到 S）可以被精确的观察到，正如纽曼先生力学描述预示和指示的那样。这个前面没有发现（如果发现也没有解释）的磁现象的解释经测试是正确的，这有力的进一步证实纽曼先生理论的有效性。

Technically speaking, like a water wheel harnessing the mechanical action of a river, Mr. Newman has effectively designed a machine capable of harnessing the above-described magnetic energy and converting it to useful electrical energy. Therefore, the produced electrical energy comes from the gyroscopic particles comprising the atoms of the magnet. A magnetic field is created (as the drawings indicate) when the atoms of a given material become aligned. According to Mr. Newman, the motion of the gyroscopic particles about the "lines (shells) of force" surrounding a magnet are a precise reflection of the interior, structural interaction of these particles within a given atom. The larger particles (quark, neutrino, meson, electron, proton, neutron, etc.) are various configurations and agglutinations of the gyroscopic particle. As the atoms become aligned within a magnet-to-be, they begin to act upon (and magnify) one another's individual, atomic, magnetic fields to integrate with one another until such fields completely mesh and expand to become the magnetic field of the complete magnet.

技术上讲，水轮可以利用河流的机械运动，纽曼先生已经有效的设计了一种可以利用上述磁能并转化成有用的电能的机器。因此，产生的电能来自于组成磁体原子的陀螺粒子。当材料的原子变得有序一个磁场就被创建（如图中所示）。根据纽曼先生所说，磁体周围“力线（壳）”中的陀螺粒子的运动是一个原子结构内部这些粒子交互的反映。更大的粒子（夸克，中微子，介子，电子，质子，中子等）是陀螺粒子的各种排列组合。正如原子变得有序会产生磁场，它们的行为独立性、原子性、磁区域性相互结合为一体，直到这样的区域完全啮合（注：像齿轮一样）并扩展成完整磁体的磁场区域。

One may wonder that, if the magnets are depleted of their gyroscopic particles during the course of the operation of Mr. Newman's machine, will they not eventually lose their mass completely? The answer is yes, although because Mr. Newman’s energy machine operates at 100% conversion efficiency (there being no radiation, heat, light, etc., as in nuclear fission reactions which operate at less than 1% efficiency), and because there are trillions plus gyroscopic particles within each atom, Mr. Newman estimates that it would literally be thousands of years before one would detect any significant , measurable amount of mass loss within a magnet.

一个人会惊奇于，如果磁体在驱动纽曼先生的能源机运行时耗尽它们的陀螺粒子，它们最终不会失去所有质量？答案是确定的，虽然因为纽曼先生的能源机工作在 100%的转换效率（不会产生辐射、热、光等，如裂变反应工作在低于 1%的效率），因为每个原子中有万亿的陀螺粒子，纽曼先生估计在检测到磁体重大、可测量的质量损失之前它能工作几千年。

It should be noted that Mr. Newman has worked on these ideas for 19 years. Mr. Newman submitted his theoretical discussion and proofs to the patent office several years before he constructed the actual working prototype of his energy machine. Mr. Newman was totally convinced of the rightness of his theories and did not need an operating machine to prove such rightness to himself. From his perspective, such a machine was needed as proof to everyone else.

应该注意到纽曼先生已经致力于这些工作 19 年了。纽曼先生几年前提交它的理论论述和证明到专利局，在他实际制作他的能量机原型之前。纽曼先生完全确信他的理论的正确性，不需要一个可操作的机器来证明他自己。基于他的观点，证明给其他人是需要这样一个机器的。

It is Mr. Newman's position that from his various theories (of which this discussion about the [magnetic- field-creating] gyroscopic particles is only a single aspect of his theories) one should be able to understand that it would be possible to construct an energy machine that was capable of harnessing such (gyroscopic) energy if one could visualize the proper configuration of the materials necessary to effect such harnessing. Such configuration is the technical aspect of the Patent itself - technically independent of, but theoretically dependent upon, understanding the nature of the gyroscopic particles and how they interact with one another, especially since all atoms in the universe are composed of such particles.

站在纽曼的位置，根据他的理论（讨论的[磁场的创建]陀螺粒子是他的理论唯一的方面）一个人应该能理解构建一个能控制这种（陀螺粒子）能量的能源机是可能的，如果一个人能洞悉必要的物质正确的构造。这样的构造是专利自身的技术方面-技术独立的，但依赖于上面的理论，理解陀螺子的原理和它们怎么交互，尤其是所有的宇宙中的原子都是由这样的粒子组成。

Although this would be a separate (but physically - related) theoretical discussion, Mr. Newman has indicated that gravitation is the observed effect of the interaction of unobserved electromagnetic fields (composed of gyroscopic particles) surrounding bodies in space. [Mr. Newman has theoretical concepts appropriate to this subject.]

虽然这将是一个分开的（但物理相关的）理论讨论，纽曼先生已经指出引力是物体周围不可见的电磁区域（由陀螺子组成）交互的可见结果。[纽曼先生的理论概念适用于这个话题。]

As the drawings also indicate, positive and negative electrical charges are determined by the gyroscopic spin of individual particles, and such charges are repelled or attracted to one another according to periphery attraction (see PROOF A).

同时两张图指出，正和负电荷决定于独立粒子的回旋，这样的电荷相互吸引或排斥是根据外围的吸引力。

The fundamental, gyroscopic particle is, therefore, the unifying factor for the nuclear, electric, magnetic, and gravitational fields.

因此，基础的陀螺子是核能、电场、磁场、引力场的共同要素。

Evan R. Soule', Jr.

New Orleans, Louisiana (1984)

NOTE: To date, over thirty individuals have signed Affidavits attesting to the rightness of Mr. Newman's invention. These individuals include electrical engineers, physicists, inventors, scientists, and explicitly: Mr. Milton Everett (biomass energy specialist with the Mississippi Department of Energy), Dr. Roger Hastings (principal physicist for Sperry-Univac in St. Paul, Minnesota), and Mr. Eike Mueller (West German scientist and European Space Agency mission coordinato1- with the National Aeronautics and Space Administration).

注意：现在为止，超过三十人已经签订宣誓书证明纽曼先生的发明。这些个人包括电学工程师、物理学家、发明家、科学家，比较有名的有 xxx。

第 4 章 一个已实现发明的讲解

Chapter 4 EXPLANATION FOR A WORKING INVENTION

"When a mathematician engaged in investigating physical actions and results has arrived at his own conclusions, may they not be expressed in common language as fully, clearly, and definitely as in mathematical formulae? If so, would it not be a great boon to such as well to express them so translating them out of their heiroglyphics that we might also work upon them by experiment?"

-Michael Faraday to James Clerk Maxwell, 1857

当一个数学家忙于研究已他经有定论的物理运动和结果时，它们也许不能用通俗、明确、肯定的语言如数学公式来表达？如果这样，这将是一个大恩惠对可以将难以理解的文字翻译过来的人们，我们可以用实验来解释？

法拉第致麦克斯韦，1857

注：不大明白说什么，可能是说如果总觉得说明白了不好，还是实验更好。

I will now present an explanation for a working invention which utilizes the energy within magnetic fields and produces more energy than is introduced into the system from an external energy input. Do not at this point reflect poorly upon yourself and blindly state "perpetual motion." Simply put, the technological process which I will discuss converts mass into energy on a 100% conversion process via $E = MC^2$.

我现在提出一种可以有效工作的发明，它利用磁场中的能量，产生多于系统输入的能量。不要盲目的认为这是“永动机”。我将简单的讨论将物质 100%转换为能量的科学过程，遵守 $E = MC^2$.

14. I believe it is imperative to reiterate that the energy in any magnetic field is the energy which composes the elements

of the atom and is literally Einstein's Equation of E = MC2. Such energy in the form of gyroscopic particles is the basic building block of all matter and provides the basis for the conceptual interface between energy and matter.

我坚信反复重申磁场中的能量来自于物质中的原子并遵守 E = MC2 是重要的。这样的陀螺子式的能量是构成物质的基石，提供基础的能量和物质的交互。

The following facts will clearly demonstrate a fundamental understanding which prepares the reader for a more thorough comprehension of how one technological embodiment of this Pioneering Invention can be built.

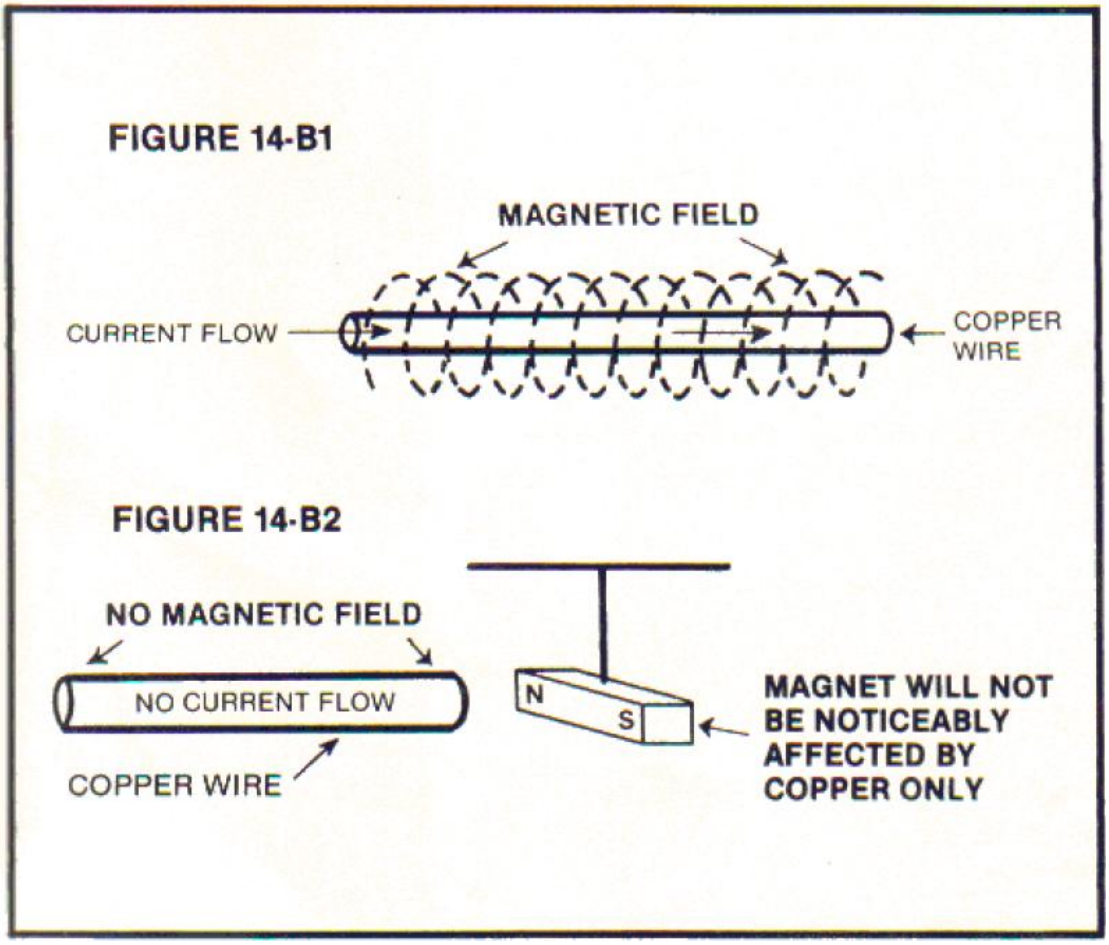
下面的实事将清楚的展示一个基础的理解，给读者关于这个能被建造的首创发明的具体技术更深入的理解。

A. The prior teachings indicate that copper is nonmagnetic and that the resulting magnetic field associated with current flow in copper is the result of the current.

原有的教学第一点指出铜是没有磁场的，磁场和电流的关联是电流的结果。

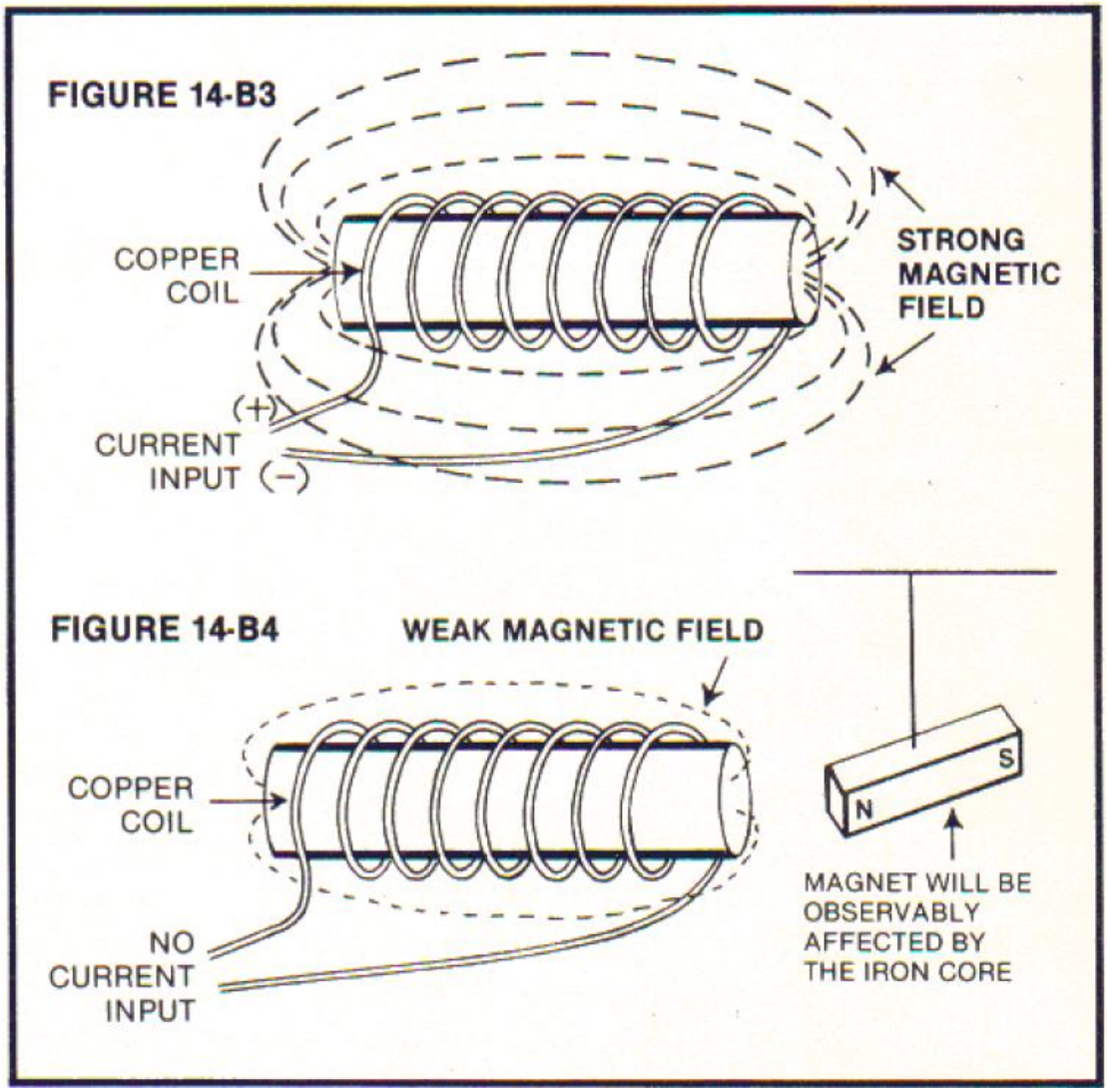
B. Those teachings are totally wrong. Copper is extremely magnetic! It is so magnetic that it deceives the observer. Example:

这些学说是完全错误的。铜是有极强磁性的！它磁性强到误导了观察者。例如：



Turn the current on as in Figure 14-B1 and a magnetic field will occur very quickly. Then turn the current off as in Figure 14-B2 and the magnetic field very quickly disappears with no remnant of the magnetic field observed in the copper material. If one then places a magnet close to the copper, it is not observed to be noticeably magnetic. Therefore, one is easily deceived since conventional, so-called magnetic materials generate a different result. Example:

改变图 14-B1 中的电流方向，磁场将迅速改变。之后断开电流如图 14-B2 磁场将迅速消失，在铜材料中没有残余的幸亏被观察到。如果一个人拿一个磁体靠近铜，没有明显的磁现象。因此，人们非常容易的被欺骗了，因为传统的被叫做磁体的材料会有一个不同的结果。例如：



By placing an iron core within a copper coil (as in Figure 14-B3) and turning the current on, a significantly stronger magnetic field will be generated than in Figure 14-B1 [for the same energy input]. Now, turn off the current as in Figure 14-B4 and there will be a small, remnant magnetic field surrounding the iron core. If a magnet is placed near the iron core, the magnet will be visibly affected. However, one is easily deceived by these tests and can be mislead into believing that copper is non-magnetic. This is exactly what happened to Hans Christian Oersted in 1820 when he first discovered that an electric current produced a magnetic field which would cause a magnet to align at right angles to the conducting wire. Oersted noted that the deflection of the magnet lasted only as long as the current was flowing through the conducting wire and hence, such magnetic action could not be caused by the (copper) wire, but must be a result of the current itself. This same incorrect conclusion is still rigidly taught to this day.

通过放置一个铁芯在铜线圈中（如图 14-B3）并接通电流，一个有重要意义的比图 14-B1 中更强大磁场将产生【用同样的能量输入】。现在断开电流，如图 14-B4，铁芯会有一个很小的残余磁场。如果一个磁体接近铁芯，磁体将明显被影响。然而，人们被非常容易被这些实验欺骗并被带入歧途，相信铜是没有磁性的。这恰恰发生在奥斯特 1820 年观察到电流产生了一个能产生一个引起磁体相对导线产生一定角度偏转时。奥斯特发现偏转只有在电流流过导线时发生，因此这种磁体运动不能由（铜）导线引起，一定是电流自身的结果。同样不正确的结论今天仍然在用于教学。

The following facts will clearly prove that copper is bigbly magnetic relative to the speed of atom alignment/unalignment as well as the action /reaction effect of the energy release (in the form of the gyroscopic particles previously discussed) from the atoms comprising the copper wire!

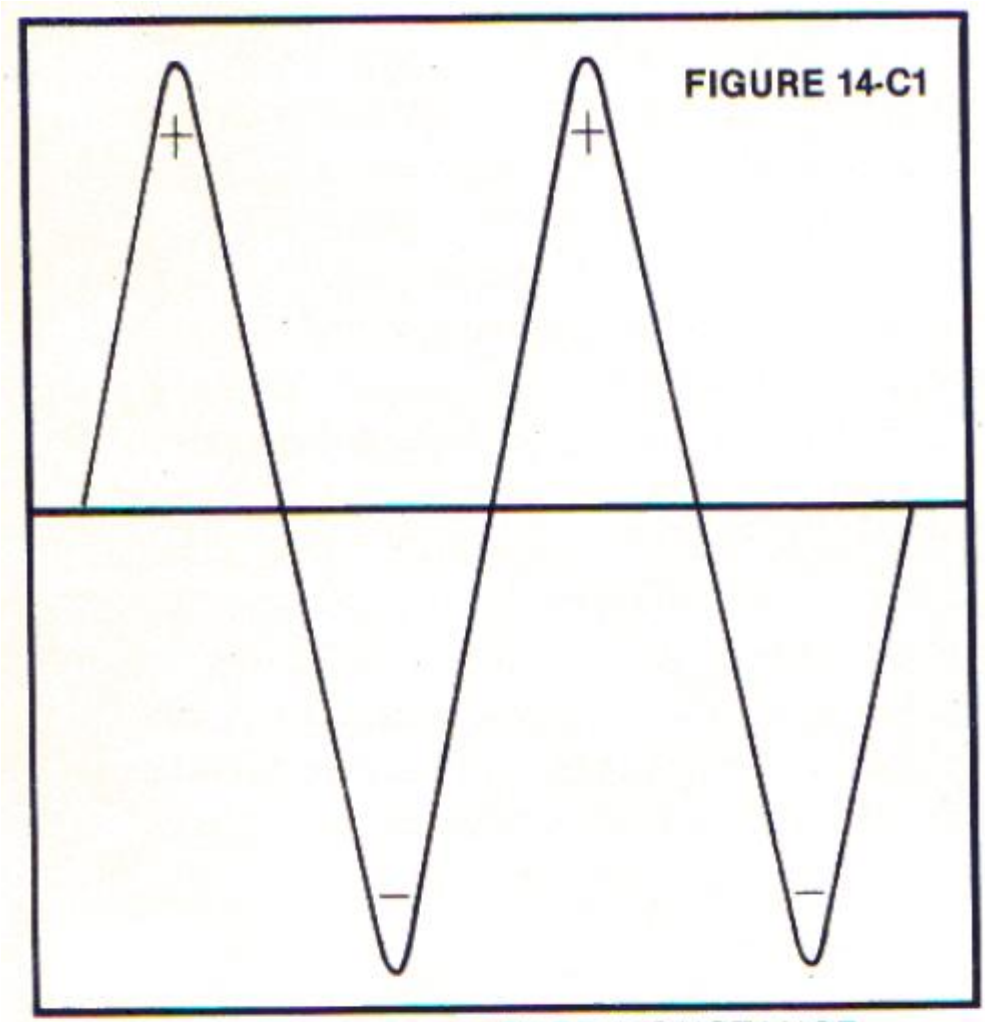
下面的事实将清楚的证明铜的磁性大小既关系到原子排序/失序的速度，也关系到组成铜线的原子释放（以前面讨论的陀螺子形式）的能量的作用/反作用效果!

"The prior teachings indicate that copper is non-magnetic and that the resulting magnetic field associated with current flow in copper is the result of the current. Those teachings are totally wrong. Copper is extremely magnetic! It is so magnetic that

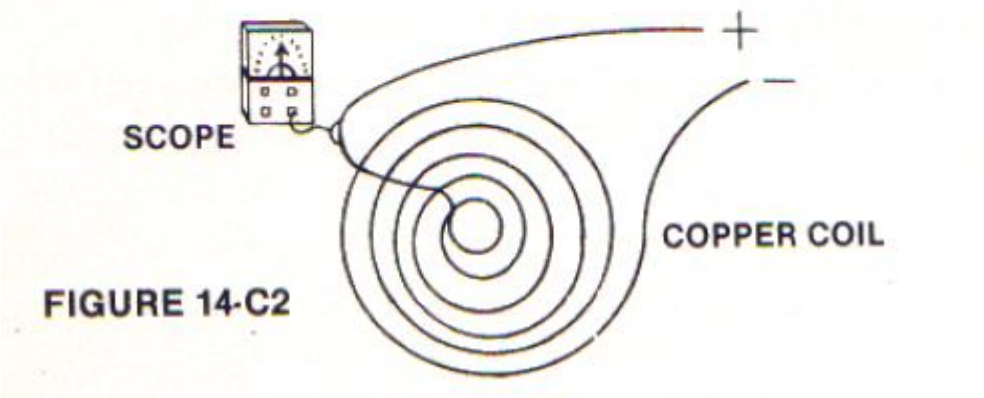
it deceives the observer."
原有的教学指出铜是没有磁性的，磁场和铜中电流的关系是电流的结果。这种学说是完全错误的。铜是极具磁性的! 它的磁性强到误导了观察者。

C. What the Prior Art teaches: Hypothetically, if one imposes current into a (copper*) conductor coil of pure inductance, the same current would be returned as that which was initially placed into the (copper*) conducting coil. (See Figures 14-C1 and 14-C2.)

原来的学说：假设，如果加大进入纯自感（铜）导体线圈的电流，同样的电流将返回，如开始输入（铜）导体线圈中的。（看图 14-C1 和 14-C2。）



GRAPH POWER IN PURE INDUCTANCE



[*This process is in no way limited to copper. Actually, one can utilize any suitable materials for conducting, e.g., super-conducting materials such as niobium tin, etc.]
这个过程中不只可以用铜。实际上，可以用任何合适的导体材料，如超导材料铌锡等。

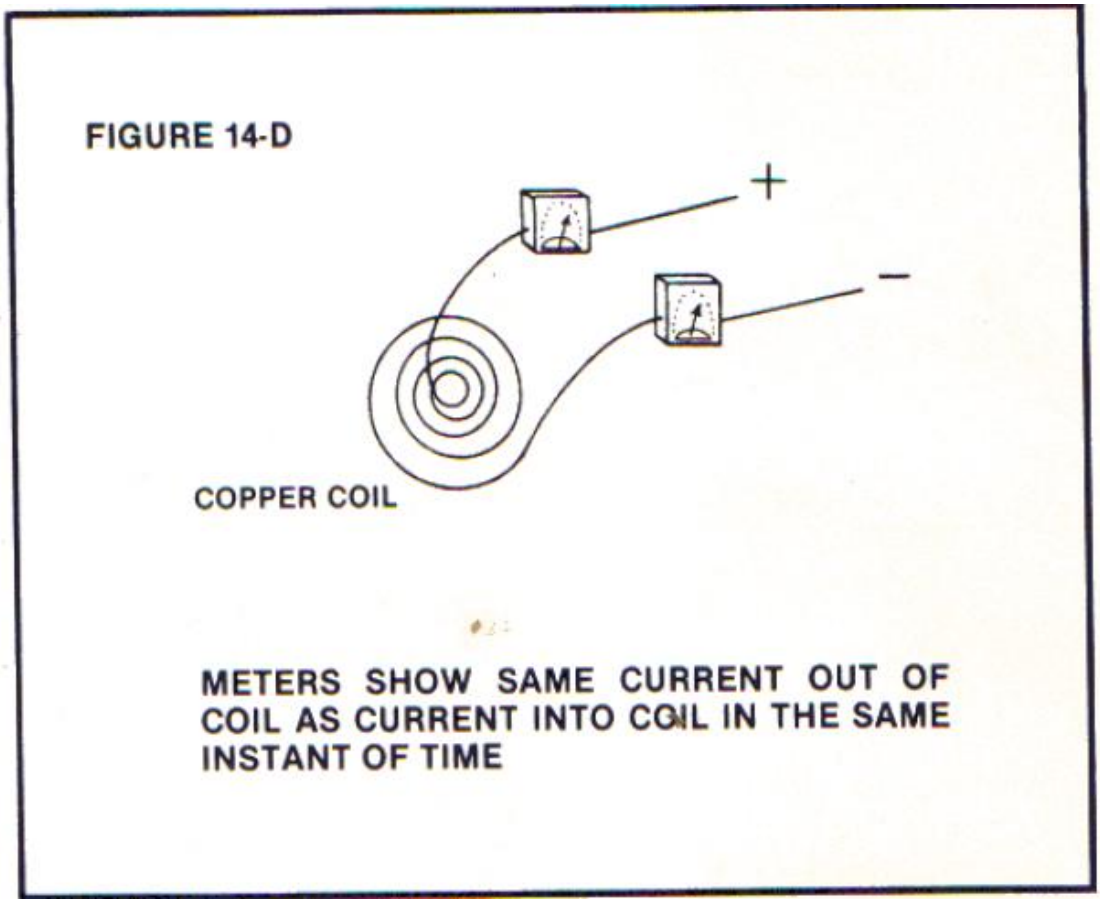
Physically speaking, this simply means that the energy contained within the magnetic field - when generated by positive (+)

current flow in one direction - is returned by the collapsing magnetic field as negative (-) current flow when the current flow reverses direction.

物理上讲，这简单的意味着磁场中的能量-由正向电流在一定方向流动产生-被返回，通过电流反向产生的负电流瓦解磁场。

D. The Prior Art also teaches Kirchhoff's Law which states: the same amount of current placed into a system (as a copper conductor) for a given-instant of time has the same amount of current flowing from that system (copper conductor) for the same given- instant of time. (See Figure 14-D.)

原来的学说也经常教授基尔霍夫法则，法则规定：瞬间输入系统（如铜导体）的电流和流过系统（如铜导体）的电流一样多（看图 14-D）。



D. The above FACTS of 14C and 14D totally contradict the prior teaching that the magnetic field generated by the current flowing in a (copper) conductor is solely a result of the current itself and that copper is non-magnetic.
Look at the facts and open your mind!

上述 14C 和 14D 的事实完全反驳了原来的学说，由电流流过（铜）导体产生的磁场只是电流本身的结果，铜完全没有磁性!

The facts demonstrate the following: 14C above shows that if one inputs a given amount of current (X) into a copper coil during a given-instant of time then, as described in I4D above, the same amount of current (X) outputs from the copper coil during the same instant of time. In addition, 14C above also shows that if the current is then cut off and the coil shorted with meters in the line, then the same amount of current (X) will now come from the copper coil.

事实证明如下：上面 14C 显示如果瞬间输入给定电流（X），如 14D 所述，同样的电流（X）将同时从铜线圈输出。另外，上述 14C 同样显示，如果电流断开并且线圈适于一米，那么同样大小的电流（X）将从铜线圈中输出。

The facts therefore demonstrate: (X) current in and(X) current out plus (X) current out again when the (X) current input is stopped. These facts are therefore equivalent to 1 (X) amount of current into the coil (copper) and 2 (X) amount of current out of the (copper) coil.

事实因此证明：（X）输入电流和（X）输入电流加当（X）输入电流断开时产生的（X）输出电流。这些事实因此

等于 1（X）电流输入到（铜）线圈，2（X）电流输出（铜）线圈。

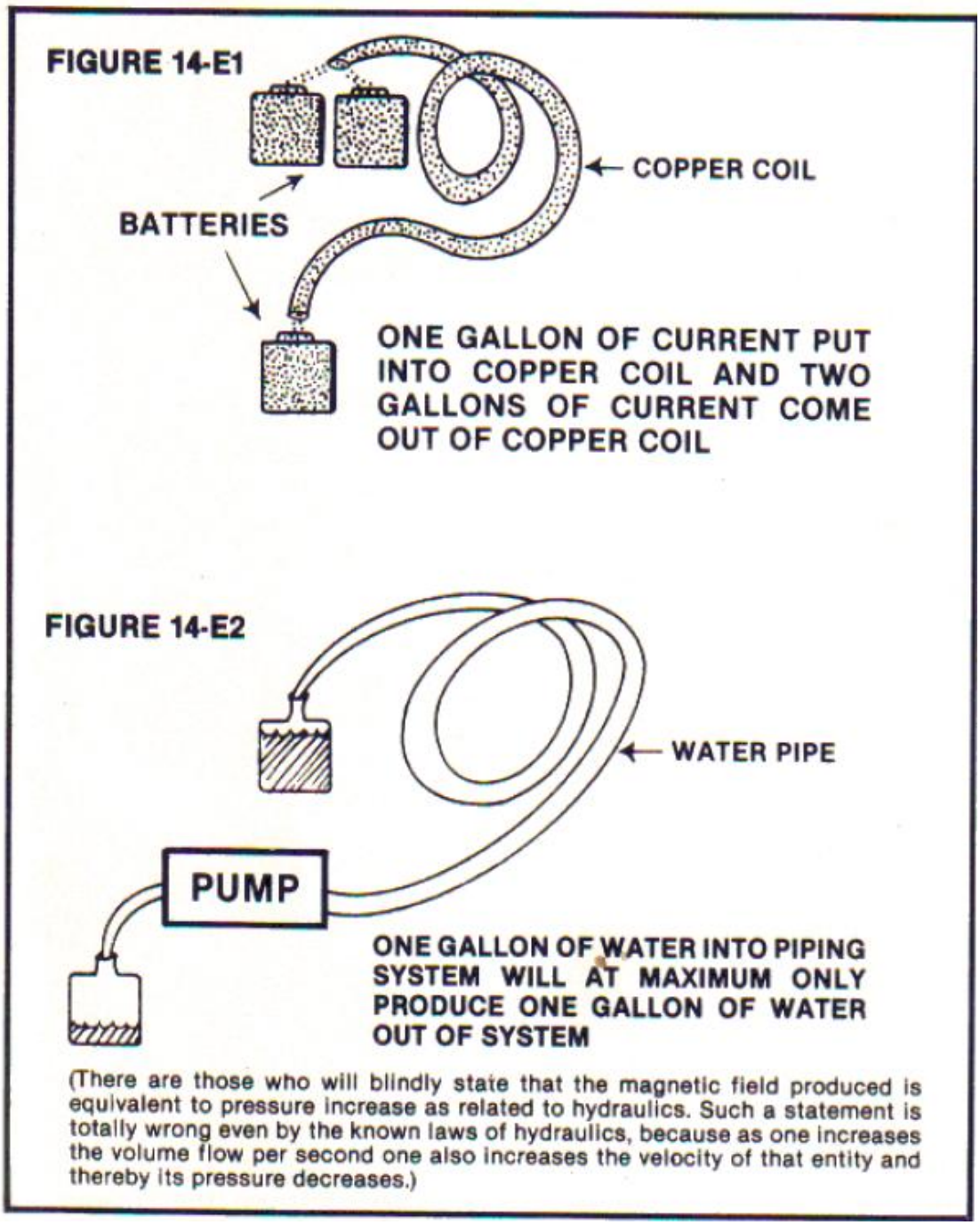
注：英文是（X）数量的电流，意思是电流量，也可说是电子流过的数量，这里将数量省略，因为不通顺。

QUESTION: From where did the extra (X) amount of current coming from the copper coil emanate?

ANSWER: By analogy, the Prior Teachings indicate that current is equivalent to the volume of water and that voltage is equivalent to the pressure of water. Therefore, one should understand the essence of this analogy relative to the facts discussed above. (See Figures 14-E1 and 14-E2.)

问题：从铜线圈中产生的额外的（X）数量电流是从哪来的?

回答：通过分析，原来的学说暗示电流可以比作水的量，电压可以比作水压。因此一个人应该明白讨论的事实的本质。(看图 14-E1 和 14-E2。)



The facts clearly demonstrate that in Figure 14-E1 , one "gallon" of current came from the copper coil Itself and most definitely not from the initial one "gallon" of current put into the copper coil. (This is an analogy only. The mass or volume of the electric current input or output cannot be seen or weighed because it is composed of gyroscopic particles and is the mechanical essence of $E = MC^2$.)

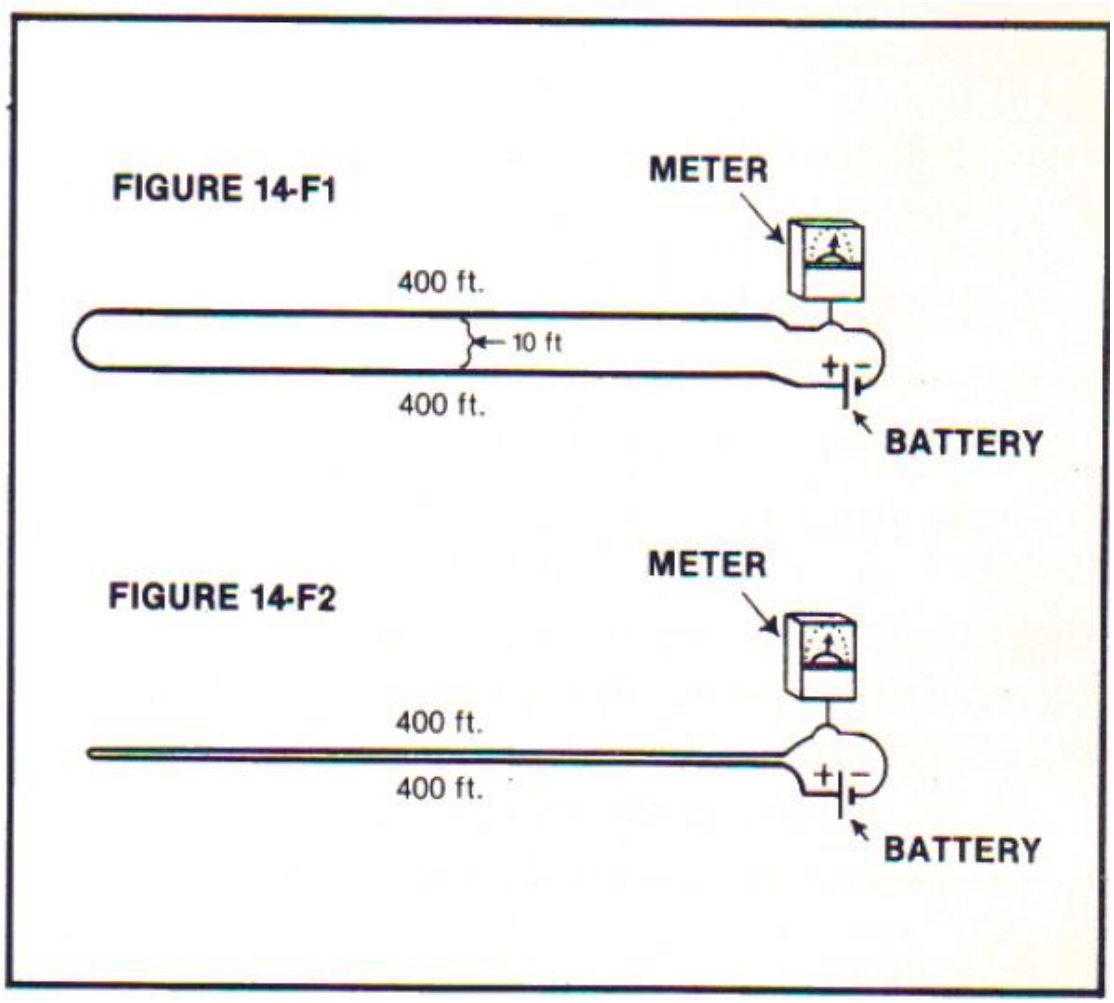
图 14-E1 的事实证明，一“加仑”的电流来自铜线圈自身，非常明确不是来自开始输入铜线圈的一“加仑”电流。（这只是一个类比。输入输出电流的质量和数量是不能看见和称重的，因为它由陀螺子组成，是 $E = MC^2$ 的本质。）

F. The Prior Teachings distort the above facts and would indicate that the analogy of one "gallon " of current has no pressure when coming from the coil in Figure 14-E1 , and that one "gallon" of current has a pressure which is thereby equivalent to one "gallon" of current with the input pressure. Furthermore, such teachings would indicate that because of the resistance within the coil and other losses, not even the latter pressure will occur in reality.

原来的学说歪曲了上述事实，指出电流“加仑”的类比当来自图 14-E1 的线圈时没有压力，并且一“加仑”的电流有输入的一“加仑”的压力。更深入的，这样的学说指出因为线圈电阻的想在和其它损失，之后的压力在实际中不会发生。

Even I was mislead by these teachings for many years, and I finally came to the realization that copper was highly magnetic by a completely different means than outlined above. These means included: (1) my general comprehension which originated with my recognition that the basic building block of all matter matter was the gyroscopic particle , and (2) a test I conducted using a single piece of copper wire 800 feet long, which was doubled-back 400 feel to the starting point and hooked to a meter and dry cell battery. (See Figures 14-Fl and 14-F2.)

虽然我也被这些常说误导了很多年，最终我认识到铜是有很强磁性的，和上面描绘的意义完全不同。这包括：（1）物质的基石是陀螺子的原始认知，（2）一个我设计的实验，只用了 800 英尺长的铜线和一节干电池，铜线有 400 英尺折叠回来到起点并连接一个电表。



The test shown in Figure 14-F1 has the parallel positions of the wire 10 feet apart, with no "Unobvious Force" between the parallel portions of the wire. The test shown in Figure 14-F2 has the parallel portions of the wire extremely close, with an "Unobvious Force" between the parallel pares of the single wire.

图 14-F1 中展示的实验有平行相距 10 英尺的一条导线，没有“不可见的力”在导线的平行部分。图 14-F2 的实验平行部分的导线离的非常近，有一种“不可见的力”在导线的平行部分。

The results of these two tests demonstrated the same current input for both tests. Prior to these results I had recognized that

the words "Work ," "Force," and "Power " are implicit engineering statements and do not represent precise, scientific terms based upon observational reality . I conceptually altered such macroscopic, engineering statements to "Obvious work," "Obvious Force," and "Obvious Power.' I would microscopically describe what occurs internally, with in matter as "Unobvious Work," "Unobvious Force," and "Unobvious Power. " (I will explain these concepts later in this Book.) Such semantic clarification enabled me to know - upon completing the above tests in Figures 14-Fl and 14-F2 -that copper is extremely magnetic.

这两个实验证明同样的电流输入到两个实验系统。在这结果之前我已经认识到“功”、“力”和“能量”是绝对的学术陈述，没有清楚科学的基于可观测事实的示范。我概念上改变这种宏观、学术的陈述为“可见功”、“可见力”和“可见能量”。我将从微观上描述在物质的内部发生了什么，如“可见功”、“可见力”和“可见能量”。(我将解释这些概念在这本书后面。）这样语义上的澄清让我知道-完全基于图 14-F1 和 14-F2 的实验-铜是极强磁性的。

G. Returning to the above test of Figure l 4-E1 and14-E2: by my teaching, the facts clearly show that in the above analogy, one gallon of current "matter" (consisting of gyroscopic particles) was released from the atoms of the copper coil! This extra one gallon of current (gyroscopic particles) comes from the component parts of the atoms comprising the copper coil and simply utilizes Einstein’s Equation of $E = MC^2$.(I must stress that this is an analogy only. The volume or mass of matter via the gyroscopic particles represents the mechanics of $E=MC^2$ and such particles cannot be seen or weighed by conventional means. Their existence can be inferred, however, based on their mechanical behavior combined with known, observational faces.)
QUESTION: How can this extra one gallon of current exist?

回到图 14-F1 和 14-F2 的实验：通过我的教学，事实清楚的表明上面的类比，一加仑电流“物质”（由陀螺子组成）从铜线圈的原子中释放! 这额外的一加仑电流（陀螺子）来自组成铜线圈的原子的组成部分，简单的利用了 E = MC2 等式。(我必须强调这只是类比。物质的数量和质量通过陀螺子表现为 E=MC2 的构成，这样的微粒不能通过传统的方法看到或称重。然而，它们的存在能基于它们和已知可观察现象关联的力学行为推断出来。）

问题：这多出来的一加仑电流如何存在?

ANSWER: The current input (gyroscopic particles) simply acts as a catalyst relative to the atoms comprising the copper coil- atoms which align and unalign extremely fast compared to the atoms of conventional, magnetic materials -thereby releasing virtually immeasurable portions of the gyroscopic particles comprising the atoms of the coil. This release generates the magnetic field. When the input current is turned off, the collapsing (gyroscopic particles of the) magnetic field within the coil results in the gyroscopic particles attempting to return to the atoms from which they initially emanated. Such mechanical action results in the gyroscopic particles striking other atoms within the copper coil at some degree of a right angle and moving at right angles to that force. This gyroscopic motion explains the source for the additional "one gallon" of current (gyroscopic particles) discussed in the above water analogy. Because of the "conversion efficiency" of this process via E = MC2, there will be no observable change in the mass of the copper coil even after decades of use.

回答：输入电流（陀螺子）简单表现为组成铜线圈原子的催化剂-铜原子与传统磁性材料相比可以极快的重排或失序-由此释放无法计量的组成线圈原子的陀螺子。这种释放产生了磁场。当输入电流断开，线圈中磁场（陀螺子）的崩溃导致陀螺子试图返回最初发出它们的原子。这样的力学运动导致陀螺子在垂直方向以一定程度撞击到铜线圈中其它原子，并在垂直于力的方向移动。陀螺运动解释了上面以水类比讨论时多出的“一加仑”电流（陀螺子）的来源。因为这个进程“转换效率”等于 E = MC2，即使用了几十年，铜线圈的物质方面将没有明显的改变。
"Such mechanical action results in the gyroscopic particles striking other atoms within the copper coil at some degree of a right angle and moving at right angles to that force."
这样的力学运动导致陀螺子在适当角度以一定程度撞击到铜线圈中其它原子，并在适当的角度向力移动。

I should add that there is an important conceptual distinction between two meanings of the word "efficiency." To state that a given invention is 8.2 efficient, i.e., it produces over eight times as much energy as it consumes, is different from stating that the invention is 100 percent efficient, i.e., it completely converts the gyroscopic particles within the magnet from "magnet mass " to electrical energy. The former process involves production efficiency and the latter process involves conversion efficiency.

另外我要说的是，效率一词的两个意义有一个重要的观念上的不同。说一个指定发明 8.2 的效率，也就是，它产生 8 倍于它消耗的能量，这不同于说发明的效率是 100%，也就是，它完全将来自磁体“磁场物质”的陀螺子转化为电能。前一个过程包含生产效率，后一个过程包含转化效率。

15. Now to discuss the practical usage for this new understanding of the gyroscopic particles which are the mechanical essence of the equation $E = MC^2$ and comprise the component parts of the atoms within all matter, conductors, and copper. By understanding the teachings (of this Pioneering Invention), one can build a physical embodiment of this Pioneering Invention by using a conducting coil which will produce more energy out of the system than that put into the system from an outside source such as battery, generator , etc.

现在讨论关于陀螺子新理解的实际应用，陀螺子是 $E = MC^2$ 等式的力学本质，是所有物质、导体和铜的原子的组成部分。通过理解教学（关于这个开创性发明），可以建造一个这个开创性发明的物理实现，通过用一个导体线圈输出多于输入系统的能量，输入能量来自外部电源如电池，发电机等。

I wish to thank Dr. Roger Hastings, Senior Physicist for Sperry-Univac, for calculating by conventional mathematics the quantitative measurements for the following test which I had proposed. Dr. Hastings is an exceptional scientist who had the character to come forth in my behalf when many others were fearful or close-minded.

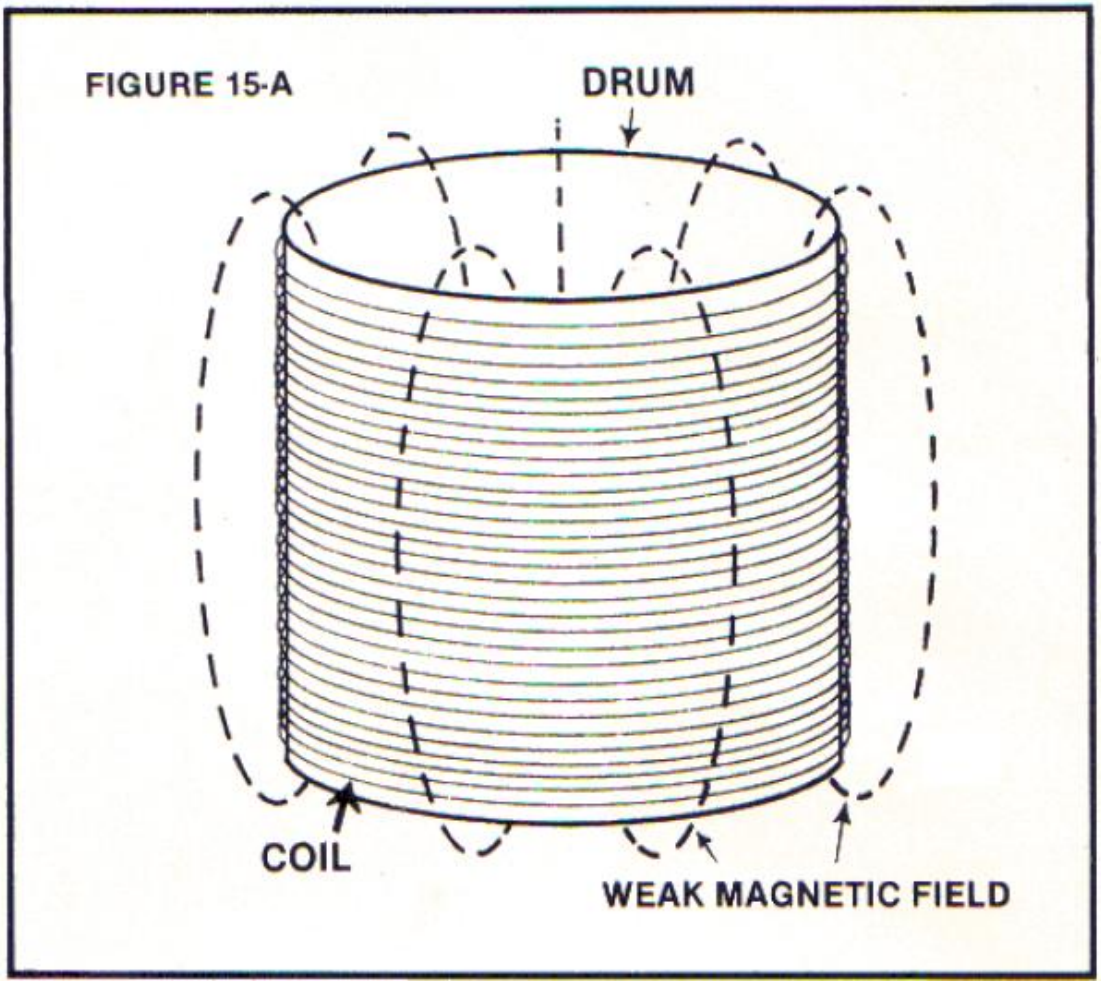
我希望感谢 Roger Hastings, . . .

For "mind-opening purposes" (to use the current vernacular) carefully study the following two tests:

为了"打开思想"（用普通的语言）认真的学习了下面两个实验：

A. Take 40-gauge copper wire which has a resistance of 1,049 Ohms for 1000 feet with a total weight (of atoms composed of gyroscopic particles) of a mere .02993 lbs., turning same into a coil with a 10-foot interior diameter and 8.32 feet in height. One would therefore have approximately a mere 31.8 turns of copper wire (copper atoms, i.e., gyroscopic particles). (See Figure 15-A.)

用（由陀螺子组成的原子）总重 0.02993 磅 1000 英尺 1049 欧 40-gauge 的铜线（gauge 是一个单位，40-gauge 应该不到 2mm），绕制成 10 英尺内直径 8.32 英尺高的线圈。这将大约仅仅 31.8 圈铜线。（看图 15-A）



If 100 volts is connected to coil 15-A, then a current flow of approximately 95MA would occur with total power input of 9.5 watts and a resulting weak, magnetic field of .012 Gauss or a mere .0000 14 Joules of energy stored in this weak, magnetic

field.

如果 100 伏特连接到 15-A 中的线圈，之后产生一个大约 95MA 的电流，总能量输入是 9.5 瓦特，导致一个微弱的 0.12 高斯的磁场或仅仅.0000 14 焦耳的能量存储在这个弱磁场中。

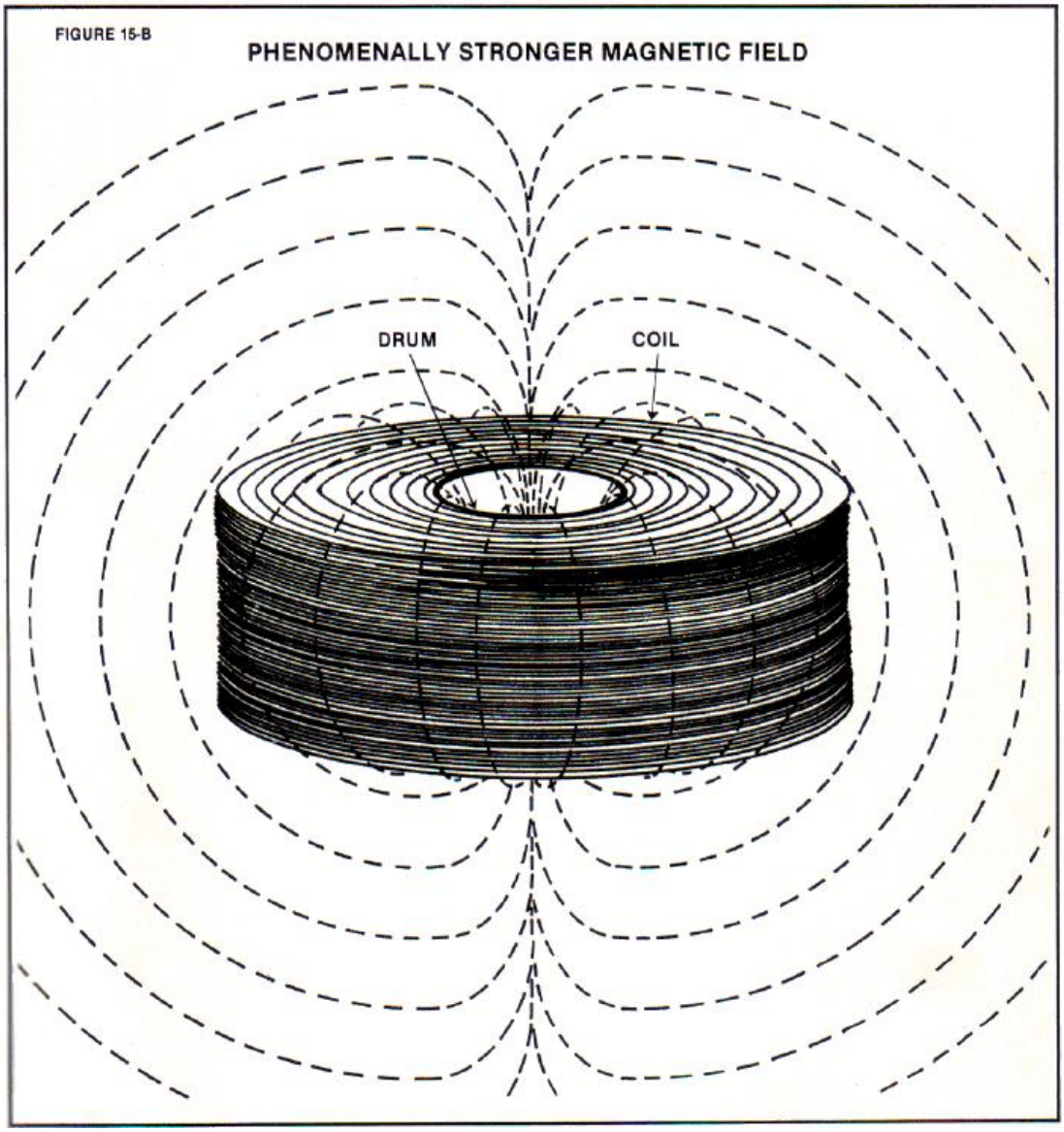
An insignificant current flow would now occur if the current input was stopped and coil 15-A was shorted-out to collapse a weak magnetic field and provide an inductance of only .003 Henries.

如果停止输入电流并短路线圈，一个微小的电流将产生，15-A 中的线圈被短路来瓦解微弱的磁场并产生一个 0.003 亨的自感应。

注：意思是断开电源并使线圈的两个输入相连。

B. Now, conduct another test with 5-gauge copper wire which has a resistance of .3133 Ohms for 1000 feet. However, to equal the same resistance as in 15-A above, one must now use 3,348,000 feet of 5-gauge wire with a massive, total weight (of atoms composed of gyroscopic particles moving and traveling at the speed of light, i.e., the mechanical essence of Einstein 's Equation $E = MC^2$) of 335,469.6 lbs. or 16.77 tons. Such wire is turned into a coil with a 10-foot interior diameter and 8.32-foot height. This structure would have approximately a phenomenal 90,000 turns of 5-gauge (copper atoms). If 100 volts were now connected to coil 15-B (see drawing below), then a current flow of approximately 95MA could occur with a total power input of 9.5 watts and a resulting, phenomenally larger magnetic field of 23.7 Gauss, or 1,905 times larger for coil 15-B than for coil 15-A, and 116 Joules of energy stored in the magnetic field of Figure 15-B below. This represents a phenomenal 8 million times more energy than in the 40-gauge coil of 15-A above.

现在，实现另一个实验，用 1000 英尺.3133 欧的 5-gauge 铜线圈。然而，为了与 15-A 有相同的电阻，现在必须用 3,348,000 英尺 5-gauge 的铜线，（由光速运动的符合 E = MC2 力学本质的陀螺子组成的原子）总重 335,469.6 磅或 16.77 吨。将这样的线圈绕成 10 英尺内径 8.32 英尺高。这个结构大约 90,000 圈 5-gauge 铜线。如果 100 伏特连接到 15-B 的线圈（看下图），之后产生一个大约 95MA 的电流，总能量输入是 9.5 瓦特，导致一个 23.7 高斯的明显的磁场区域，或比 15-A 中的线圈大 1905 倍，116 焦耳能量存储在 15-B 中的磁场中。这显示出比 15-A 中 40-gauge 线圈多明显的 8 百万倍的能量。



A phenomenally larger current flow would now occur if the current input was stopped and coil 15-B was shorted-out as a result of the collapsing, much greater magnetic field of the 5-gauge wire in coil 15-B. Such shorting would generate an inductance of 25,700 Henries, which is better than 8 million times the inductance of the 40-gauge coil in Figure 15-A above.

如果停止输入电流并短路 15-B 中的线圈，一个明显的大电流将产生，作为瓦解 15-B 中 5-gauge 线圈这么大磁场的结果。这将产生 25,700 亨的自感应，比图 15-A 中 40-gauge 线圈的自感应大 8 百万倍。

Clearly, these facts - combined with the above FACTS 1 through 14 - prove beyond any doubt that Oersted's conclusion in 1820 (which is still taught to this day): "that the magnetic field came only from the current and not the conductor" to be totally false. [Although his conclusion is incorrect, I remain grateful to Hans Christian Oersted for being the first to notice and attempt to explain an observed connection between an electric current and a magnetic field.)

明显的，这些事实-结合上面 1 到 14 的事实-毫无疑问的证明奥斯特 1820 的结论（今天依然被教授）：“磁场来只自电流而不是导体”是完全错误的。（虽然这个结论是不正确的，我依然感谢奥斯特第一个注意并试图解释观察到的电流和磁场的联系。）

When coupled with FACTS 1 through 14, tests 15-A and 15-B clearly prove that the phenomenal difference in strength for the resulting magnetic fields (implying great differences in stored energy) and additional current flow when the input current was stopped (inductance), had to come from the gyroscopic particles comprising the component parts of the atoms within the copper coil.

当把事实 1 到 14、实验 15-A 和 15-B 联系起来，清楚的证明当电流停止输入时磁场（表明存储能量差距很大）和电流的强度不同，一定源自于组成铜线圈的原子的陀螺子不同。

注：原子明显多了。

The current flow input was the same in both tests, but the number of atoms (lbs. of copper) varied considerably from test 15-A to test 15-B correlating precisely with the phenomenal difference in the strength of magnetic fields produced, the extreme difference in the stored energy (gyroscopic particles), and the great difference (inductance) in the additional current flow produced when the input current was stopped in test 15-A and test 15-B. These phenomenal differences represent the mechanical essence of $E = MC^2$: gyroscopic particles.

输入电流两个实验中是一样的，但原子的数量（铜的磅数）从 15-A 到 15-B 的实验变化颇大，和产生的磁场强度、存储能量的（陀螺子）、电流停止输入时产生的额外电流的巨大差异精确的吻合。这些明显的不同表明 $E = MC^2$ 的力学本质：陀螺子。

All of the above FACTS 1 through 15 scientifically establishes the position that the mathematical formulas employed in the calculation of the energy within a magnetic field (intended to represent the potential energy or stored energy of Joules in a magnetic field) are totally incorrect. The FACTS above clearly indicate that the magnetic field consists of gyroscopic -type particles which are the mechanical essence of $E = MC^2$ and represent an orderly flow of kinetic energy.

所有以上 1 到 15 的事实科学的说明了用于计算磁场中能量（用于表示潜在能量或磁场中存储的焦耳数）的数学公式是完全错误的。上面的事实清楚的指出磁场由陀螺子组成，陀螺子是 $E = MC^2$ 的力学本质，表现出有序流动的机械能。

I will go further and stare that "potential" energy, as such, does not exist! All energy is kinetic in nature, since the gyroscopic particles continue, under all conditions, to move and spin at the speed of light in accordance with $E = MC^2$.

更深入的观察这样的“潜在”能是不存在的！所有的能量是自然的机械能，因为陀螺子在所有环境连续以光速运动旋转，符合 $E = MC^2$。

The above FACTS prove beyond question that the proper mathematical equation (concerning the "kinetic" energy which makes up a magnetic field) muse be relative to $E = MC^2$. A proper mathematical equation would recognize that the "Unobvious Force "produced represents the Joules of the "Unobvious Power' activated at that instant-in-time and as so used would diminish the mass of the source of the magnetic field via a 100% utilization (conversion efficiency) of Einstein’s Equation E = MC2, since the magnetic field consists of kinetic energy having a gyroscopic action which represents the mechanical essence of E = MC2.

上述事实证明合适的数学公式（关于组成磁场的机械能）必须符合 $E = MC^2$。一个合适的数学公式将承认“不可见的力”产生“不可见的能量”的焦耳在那个时刻，并且这样使用将以符合 $E = MC^2$ 的 100%和利用率消耗磁场源的物质，因为磁场由有陀螺运动的机械能组成，显示出 $E = MC^2$ 的力学本质。

"... the magnetic field consists of gyroscopic-type particles which are the mechanical essence of E = MC2 and represent an orderly flow of kinetic energy. "

磁场由陀螺子组成，陀螺子是 $E = MC^2$ 的力学本质，表现为有序流动的机械能。

I leave the task of determining the nature of such equations to a thinking, questioning mathematical mind, as I do not have the mathematical expertise. It should be noted, however, that -the mechanical comprehension of a natural phenomenon has often historically preceded a mathematical model. James Clerk Maxwell acknowledged the importance of Michael Faraday’s mechanical and experimental abilities.

我没有确定公式定理，因为我没有相关数学知识。然而，应该注意到一个自然现象的力学理解经常历史性的产生一个数学模型。麦克斯韦承认法拉第力学实验能力的重要性。

Maxwell also recognized that such mechanical aptitude constituted a major intellectual input to his later mathematical theories. In his paper 'On Faraday's Lines of Force,' read before the Cambridge Philosophical Society on December 10, 1855 and February 11, 1856, Maxwell explicitly stated his debt to Faraday:

麦克斯韦同样承认这样的动手才能给后来的数学理论建立很大的启发。在剑桥哲学社会上“法拉第的力线”一文里，1855 年 10 月和 1856 年 2 月，麦克斯韦向法拉第致歉：

"The methods are generally those suggested by the processes of reasoning which are found in the researches of Faraday, and which, though they have been interpreted mathematically by Prof Thomson and others, are very generally supposed to be on an indefinite and unmathematical character, when compared with those employed by the professed mathematicians. By the method which I adopt, I hope to render it evident that I am not attempting to establish any physical theory of a science in which I have hardly made a single experiment, and that the limit of my design is to shew bow, by a strict application of the ideas and methods of Faraday, the connexion of the very different orders of phenomena which he has discovered may be clearly placed before the mathematical mind. "*

“在研究法拉第时发现方法通常被推理过程启示，它们已经被汤姆森教授用数学解释，但和专业数学家相比依然是模糊不精确的。通过我采用的方法，我希望特别说明我没有试图建立任何科学的物理学理论，我曾经很难做一个简单的实验，我设计能力的不足是很明显的，通过法拉第的观点和方法的精确的应用，法拉第发现的现象与众不同的规律的关系已经清晰的放到了数学面前。”

B. In 1979, I filed a patent for this Pioneering Invention of which several embodiments have been taught and disclosed since that time. The use of a conducting coil is one of those embodiments and the original parent and continuing patent applications were filed before any physical prototypes based on the Theory were built. The physical prototypes were thereafter built for the benefit of others, not for myself, since I knew such prototypes would operate as I had predicted. Scientifically, one should find pertinent the fact chat when these prototypes were constructed, they performed exactly as I had conceptually predicted in the patent applications for this Pioneering Invention.

1979 年，我为这个创造性发明申请一个专利，那时几种实现已经被教授和发现。导体线圈是这些实现的一种，原始的和后续的专利应用已经在基于这个理论的任何物理原型之前被申请。为了其他人的利益我建造了物理原型，因为我知道它将如我想的一样运行。科学的说，当这些原型被创建后关于真相的讨论是中肯的，它们正如我已经在给这个创造性发明申请的专利中预示的那样准确的工作。

See below picture 15-C1 featuring one of these early prototypes utilizing 5-gauge, insulated copper wire with a total weight of approximately 4,200 lbs. of copper atoms (or over two tons), 300 lbs. of No. 30

看下图 15-C1 是这些早先用 5-gauge 铜线原型的样子，绝缘铜导线总重大约 4200 磅（超过 2 吨）。

Gauge copper wire (atoms) wrapped over the outside of the 5-gauge wire (atoms), and a permanent magnet containing approximately 600 lbs. of atoms (or slightly less chat 1/3 of a ton). [l am deliberately referring to the wire as "atoms" and describing the magnet as 600 lbs. of "atoms" in order to accustom the reader to a mechanical perspective concerning the nature of the action of the gyroscopic particles contained within all atoms.]

铜标线（原子）覆盖在 5-gauge 线（原子）外面，并有一个 600 磅原子的永磁体（刚不到 1/3 吨）。【我故意把线加上“原子”，描述磁体 600 磅原子，是为了使读者习惯于关于所有原子中都包含陀螺子运动原理的力学观点。】

The massive, permanent magnet had an approximate 20-inch diameter and was slightly less than 4 feet long. The large, conducting copper coil had an approximate l .D of 4 feet, was approximately 3 feet in height, and was wrapped upon a large fiberglass tube. The total weight of the system was approximately 5,000 lbs.

大永磁体有一个大约 20 英寸的直径，刚不到 4 英尺长。大铜导体线圈大约 l .D of 4 英尺，大约 3 英尺高，绕在大玻璃纤维管上。系统总重大约 5000 磅。

PHOTO 15-C1 (SIDE VIEW) PHOTO BY MATT ANDERSON

PHOTO 15-C1 (TOP VIEW) PHOTO BY MATT ANDERSON

The photographs shown in 15-C1 simply represent a primitive, handmade prototype made (in the backwoods of Lucedale, Mississippi, by me and my lovely, devotee! wife) to prove to others that the Technical (Theoretical) Process which l originally developed and taught is correct. I consider the Technical Process to be 10,000 times more important that the primitive working prototypes.

15-C1 中显示的照片简单的展示了一个原始的粗糙的原型（在 XXX 和我妻子制作），制作它是为了向其他人证明我最初教授的理论过程是正确的。这认为理论过程比一个原始的可工作的原型重要 10000 倍。

With only 1.5 watts input, the back power (emf) produced would generate a spark at the commutator of such heat magnitude that the back power would, in 2 short period of time, explode and destroy a ceramic insulator from a 5-watt resistor placed on the commutator at the point of current reversal. Dr. Roger Hastings estimated the back emf to be in excess of 80,000 watts.

只有 1.5 瓦我输入，反向功率（电动势）在换向器产生一个能级很大的火花， 反向功率将在两个瞬间激增并摧毁一个陶瓷绝缘器，电流来自一个放在换向器切换电流方向地方 5 瓦的电阻。Dr. Roger Hastings 估算反向电动势可达到极高的 80000 瓦。

The rotating, handmade, 600 lb. (of atoms), 4-foot magnet permitted a slow RPM. At 200 RPM it was calculated by others

that the centrifugal force would be 10,000 lbs. of force attempting to pull the magnet apart.

旋转、粗糙、600 磅 (原子)、4 英尺的磁体有一个缓慢的 200 转/分钟的转速, 其他人计算拉扯磁体的离心力是 10000 磅。

Everyone who initially viewed the massive unit in 15-C1 above was then asked the question: "Based on your expertise, how much power would be necessary to simply operate this device mechanically?" Answer: from 200 to 1000 watts. Other skilled individuals - upon learning that the unit had only copper in the coil -stated that in their expert opinion, the unit would be highly inefficient since it contained no iron core.

看过上面 15-C1 中很重装置的人将问这样的问题：“基于你的理论，要多少能量才能操作这个力学装置？”回答是 200 到 1000 瓦。另外有人说-上面可知装置只有铜线圈-以他们的观点，因为没有铁芯装置效率很低。

However, the facts pertaining to the unit's operation in 15-C1 do clearly prove that the unit could operate on less than 3/2 watts and that it was phenomenally efficient, i.e., far in excess of I00% production efficiency relative to the power out of the system compared to the external power into the system, and exactly 100% conversion efficiency relative to the conversion of the mass (gyroscopic particles) of copper atoms to electrical and rotational energy output.

然而，15-C1 中装置运行的事实清晰的证明，装置可以用少于 1.5 瓦的能量操作，它显然很有效率，换言之，远远高于 100%的生产效率，通过对比输入系统的能量和输出系统的能量对比可知，精确的 100%的转换率，转换物质（陀螺子）的铜原子为电能和旋转能。

I must stress that this process is not "perpetual motion." Anyone who follows my teachings is simply convening (on a 100% conversion efficiency basis) mass into energy via a 100% (or more) production efficiency process. Therefore, the energy out of the total system is equivalent to the small amount of electrical energy input (acting as a pure catalyst) plus the extant magnetic energy (in the form of gyroscopic particles) within the system. Due to this latter combination of energies, it may be said that the external energy output is greater than the external energy input.

这必须强调这个过程不是“永动”的。任何随我学习的人都可以简单的转换（以 100%的转换率）物质为能量，以 100%(或更大)的生产率。因此，系统输出的总能量等于输入的小量的电能（作为纯催化剂）加上额外的系统的磁能（陀螺子形式）。基于这种能量组合，也许可以说额外的能量输出大于额外的能量输入。

"The energy out of the total system is equivalent to the small amount of electrical energy input (acting as a pure catalyst) plus the extant magnetic energy (in the form of gyroscopic particles) within the system."

系统输出的总能量等于输入的小量的电能（作为纯催化剂）加上额外的系统的磁能（陀螺子形式）。

I will again turn to Dr. Roger Hastings (Senior Physicist with Sperry- Univac) who has conducted more tests on different occasions upon my working prototypes than anyone else. I reemphasize the point that Dr. Hastings is an exceptional scientist who has courage and the true scientific attitude. As a result, he came forth in my behalf when many others were frightened or close-minded.

注：夸赞 Dr. Roger Hastings

The verification of the operation of the unit in 15-C1 above, as well as ocher prototypes, and rile qualitative scientific ability and fortitude of Dr. Hastings are clearly demonstrated via the test described in Chapter Five. Such a healthy, scientific attitude is even more exemplified by the fact that Dr. Hastings went on record as having once had the attitude that, before he traveled to Lucedale to meet me, to listen to my concepts, and co conduct tests, he was of the belief that he would be confronting a "crack-pot inventor." Fortunately, Dr. Hastings' skepticism was tempered with genuine curiosity. I have discovered that without such curiosity, skepticism will rapidly decay into cynicism.

注：夸赞 Dr. Roger Hastings

Dr. Roger Hastings' statements and tests follow.

下面是 Dr. Roger Hastings 的陈述和实验。

注：下一章

第 5 章-黑斯廷斯博士的声明

非重点

第 6 章 更小装置的描述

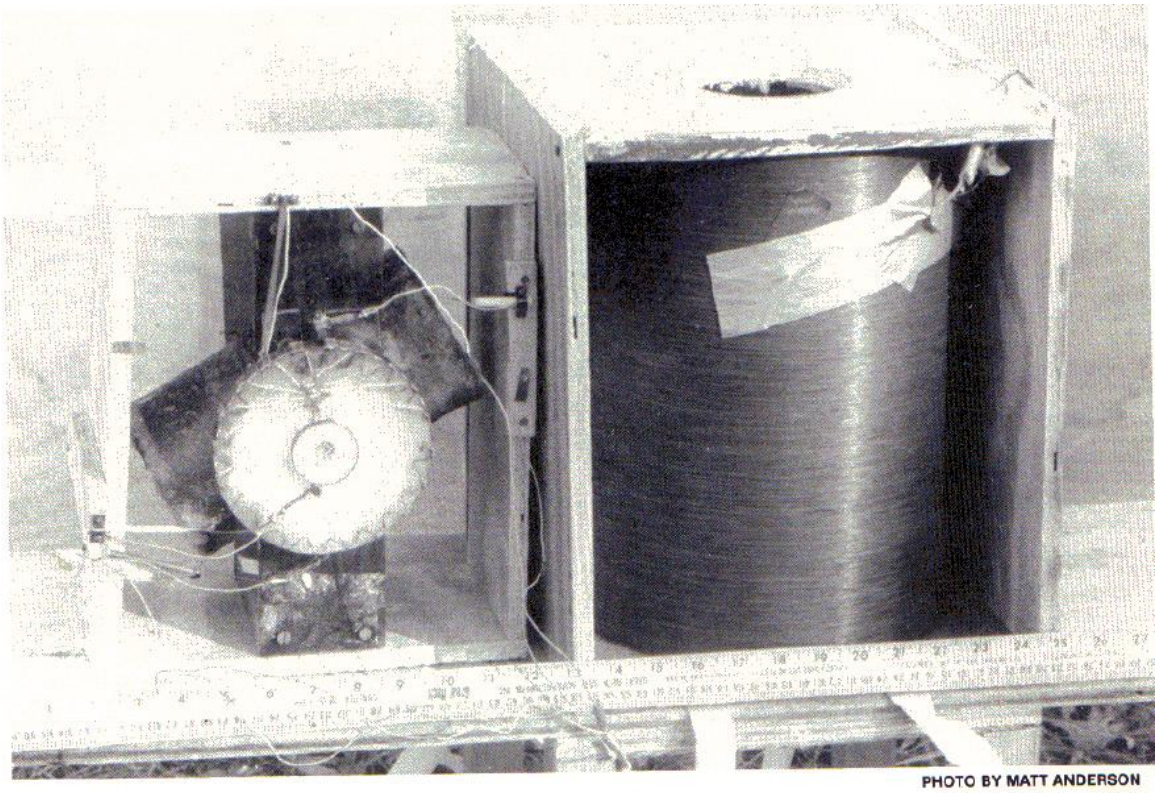
Chapter 6 DESCRIPTION OF SMALLER UNIT

WITH AN AFFIDAVIT BY DR. ROGER HASTINGS
带有黑斯廷斯博士的宣誓书

The following is a smaller unit (see photograph 15-C2 below) composed of 30-gauge, insulated, copper wire weighing approximately 145 lbs. (atoms) and having a rotating magnet of 14 lbs.(atoms). This portable unit, with very little current input, clearly demonstrates an energy output which is greater than the external energy input. With 300 volts input of pressure, only 1.5 milliamps of current (volume of gyroscopic particles) went into the copper coil (of atoms), which is less than 0.5 watt input for an energy output in excess of I 0 watts.

Photograph 15-C2:

下面是一个小装置（看图 15-C2），由 30 gauge 的绝缘铜线组成，重大约 145 磅（原子），有一个 14 磅（原子）的可转动磁铁。这个便携装置输入很小的电流可以明显的看到输出的能量多于输入。用 300 伏的输入电压，只有 1.5 毫安的电流（大量陀螺子）输入到铜线圈（原子），这小于 1.5 瓦的输入产生多于 10 瓦的输出。



See below copy of a test conducted by Dr. Roger Hastings utilizing the 15-C2 unit.

看下面 Dr. Roger Hastings 复制的 15-C2 装置的测试。

AFFIDAVIT

June 17, 1984

TO WHOM IT MAY CONCERN :

On June 16 and 17, 1984 I ran a series of tests on Joseph Newman 's 145 lb . motor with 14 lb . rotary . These tests show that power is generated by the motor which greatly exceeds the battery input power . The results are summarized briefly below :

1884 年六月 16 和 17 号，我做了一系列关于纽曼的有 14 磅转子 145 磅发电机的测试。这些测试说明发电机产生的能量多于电池的输入能量。结果总结如下：

1. Demonstration of Large Current Spikes Produced by the Motor

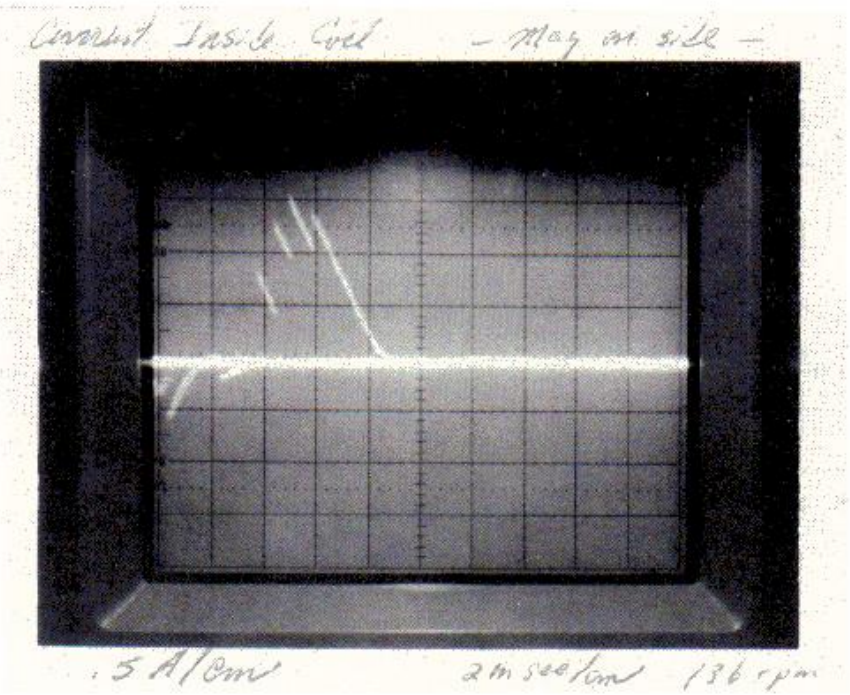
A . Oscilloscope Readings

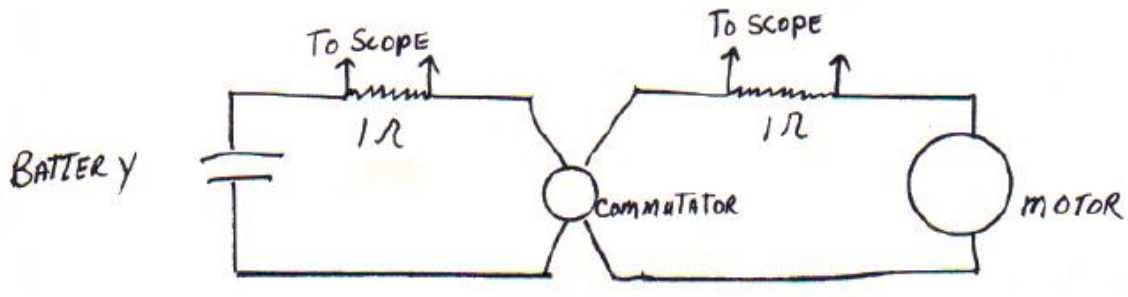
The oscilloscope showed large (1 Amp) staircase current spikes of significant time duration , which were initiated when the commutator switched , and flowed both in the coil and battery portions of the circuit . A picture of this spike taken on the coil side of the commutator is attached . A block diagram of the circuit is shown below .

1. 证明发电机产生了有高峰值的大电流

A. 示波器读数

示波器显示了重要的持久的大的（大于 1 安）梯形电流峰，当换向器切换时从新开始，流向电路中的线圈和电池。一张图版，在换向器在线圈一侧时拍摄，附在下面。电路的图表在下面展示。





B . Circuit Breaker Tests

An ammeter which has a built in circuit breaker was placed in the circuit . When the meter was placed on the 100 ma scale, the breaker opened, both on the battery and coil side of the commutator .

The breaker did not open when the meter was placed on the one amp scale, however, it was verified that a current input of more than 1.5 times the full scale deflection did not open the breaker.

B. 电流短路测试

一个有电路开关的电流表加入到电路中。当电流表放到 100 毫安的偏移时,开关打开,换向器在电池和开关的一侧.

当电流表电流超过 1 安时电路断开,然而,证明多于满刻度 1.5 倍的输入电流没有打开开关.

C . Temperature Rise

A five hundred ohm risistor was placed in series with the battery . The resistor was water-proofed and placed in a small thermos container with a precision thermometer. A temperature rise of approximately one degree Centigrade was observed in a period of fifteen minutes. To raise the temperature of the 21 grams of water by 1 degree in fifteen minutes requires at least an average power of:

C. 温度升高

一个 500 欧的薄膜晶体管与电池串连。晶体管是防水的，放到一个有温度计的热水瓶中。在 15 分钟内观察到大约升高了 1 度。在 15 分钟内升高这 21 克水 1 度所需求最少的平均能量为：

$$P = \frac{\frac{1\ cal}{gm°C} \times 21\ gm \times 1°C \times 4.19\ J/cal}{15\ min \times 60\ sec/min} = 0.1\ Watts$$

Since the power supplied by the current flowing in the resistor is I^2R, where I is the average current and R = 500Ω， it follows that a current of at least 14 ma on the average must flow in the circuit . This result was verified experimentally by supplying 14 ma to the 500Ω resistor via a battery and series resistors .If the current contained in the spikes (attached photo) is averaged over the cycle time, the result is consistent with an average current of 14 ma.

因为能量由电流流过晶体管产生，符合 I^2R，I 是平均电流，R = 500Ω，也就是说电路必需流过最少 14 毫安的电流。这个结果被实验证明，通过一个电池提供 14 毫安的电流流过 500Ω的薄膜晶体管。如果电流，包含峰值（附图中），是周期内的平均值，结果是和 14 毫安的平均电流等同。

注：C 是用电路加热水的方式来计算系统的输出能量。

2. Demonstration that Large Current Spikes are not Produced by the Battery.

2.证明大电流峰不是由电池产生。

A. Current Readings

When a Simpson amp meter is placed in series with the batteries, a d.c . input current of 1.2 ma is registered. The battery input current is therefore 1.2 ma .

当一个 Simpson 电流计和电流串连，一个 12 毫安的直流输入电流被检测到。电池输入因此是 1.2 毫安。

B. Expected Input Current

When the rotor is stopped, the input current from the batteries is measured to be 6 ma (this is in agreement with 304 volts and 50 K/L coil resistance). The coil inductance , as calculated from the number of wire turns and the geometry, is 16,000 Henries. At the operating speed of 136 r.p.m., the inductive reactance of the coil is 230 K/L., which is much large than the coil resistance . The expected battery input current is 304 V/230 K/L= 1.3 ma, in good agreement with the measured input of 1.2 ma.

B. 期望的输入电流

当轮子停止，来自电池的输入电流为 6 毫安（这符合 204 伏和 50 K/L 的线圈电阻）。线圈电感，从线圈圈数和形状计算出来，是 16,000 H。在 136 圈每分钟的速度，线圈的感抗是 230 K/L，远远大于线圈电阻。期望的电流输入是 304 V/230 K/L= 1.3 ma，非常好的符合测试到的输入 1.2 毫安。

C. Constant Battery Voltage

During four hours of continuous running of the motor, the voltage remained constant at 304 volts. If the 15 ma average current contained in the spikes came from the batteries, they would drain down significantly in the four hour period. By draining 14 ma from a fresh 9 volt transistor battery identical to those on the motor it was found that the 14 ma drain causes the voltage to drop by 2% per hour. Thus if the 14 ma were originating at the battery, the battery voltage would drop by 24 volts in four hours . No drop was observed .

C.恒定的电池电压

在发电机连续运行的四个小时中，电压保持在 304 v 的恒定水平。如果 15 毫安的平均电流包含来自电池的峰值，它们将在四小时内耗尽。通过从一个 9v 的晶体管电池释放 14 毫安电流，和电动机一致，发现 14 毫安的消耗会引起电压每小时下降 2%。因些如果 14 毫安完全由电池产生，电池电压将将在四小时内下降 24 伏。但没有发现电压下降。

注：C 在证明能量不全来自于电池。

D. Larger Current Spikes on Coil Side

The current spikes, as recorded on the scope, were larger on the coil side of the commutator than on the battery side. This indicates that the spikes originate at the coil, with some loss occuring at the commutator .

D. 线圈一侧的大电流峰

电流峰，如记录的幅度，换向器线圈一侧大于电池一侧。这指出峰值产生于线圈，在换向器处有一些的损耗。

E. Negative Current

A significant portion of the spike in the battery circuit is negative (opposing the battery voltage). The battery cannot generate such a negative current.

E. 反向电流

在电池电路峰值一个重要的部分是反向电流（和电池电压相反）。电池不能产生这样一个反向电流。

F. Dependence Upon Rotary Position

The intensity of the spikes varies greatly with the placement of the rotary. For example, when the rotor is on the side (outside) of the coil the spikes are large . They virtually disappear when the rotary is placed on top of the coil .

F.依赖于旋转位置

峰值的强度变化非常依赖于旋转的位置。例如，当转子在线圈一侧（外侧）峰值最大。当旋转到线圈顶部时消失。

3. Power and Useful Output

3.功率和有用的输出

A . Output verses Input Power

Since an average of 14 ma flows through the 50 K/L coil, the heat dissipated in the coil is ten watts . The battery input is 1.2 ma times 304 volts, or 0.36 watts. The heat generated in the coil is 27 times the input power . Note that if the ten watts were delivered by the batteries, they would drain down very quickly. These batteries have been used in frequent demonstrations for long durations by Mr. Newman over the past several months . As mentioned above , four hours of motor operation during these tests did not measureably lower the battery voltage.

A. 输出和输入的功率

因为一个 14 毫安的平均电流流过 50 K/L 线圈，在线圈损耗的热量是 10 瓦。电流输入是 1.2 毫安乘以 304 伏，或 0.36 瓦。线圈产生的热是输入功率的 27 倍。注意，如果 10 瓦是由电池提供，它们会很快被耗尽。在很长的时间内纽曼先生已经证明，这些电池已经被用了几个月。如上述所说，发电机运行的 4 个小中这些测试没有测试到低于电池的电压。

B. Useful Output

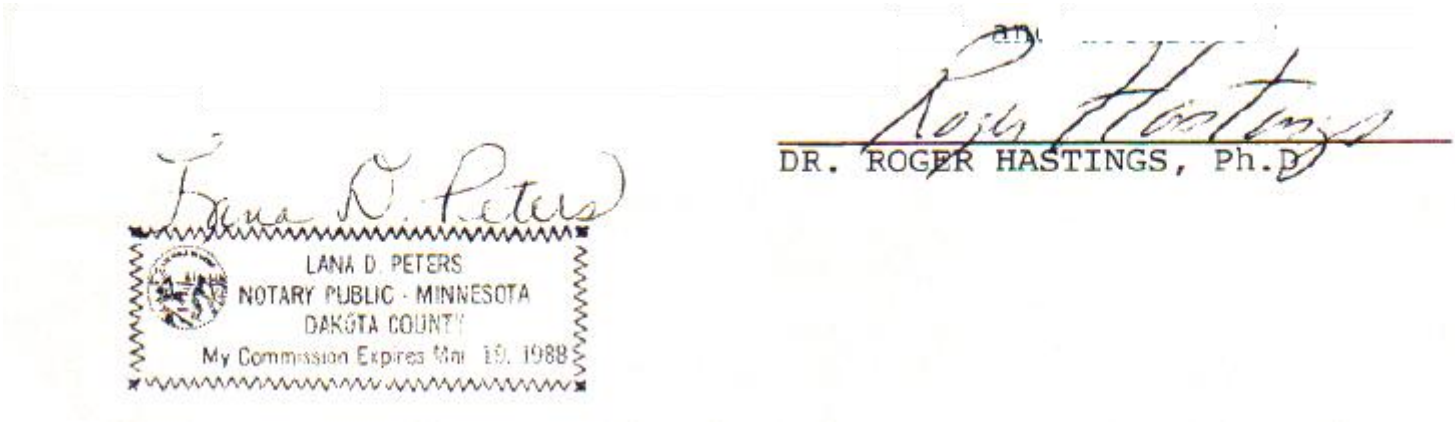
Mr . Newman placed a 75 Watt, eight foot, flourescent tube across the motor coil, and the bulb lit to perhaps 10% of full brightness. Interestingly , when the bulb was inserted, the rotary gained speed, and the motor drew less current from the batteries! The lit 75 watt tube demonstrates useful output of several watts, with a fractional watt input power.

B. 有用的输出

纽曼先生放了一个 75 瓦 8 英尺长的荧光管穿过电机线圈，电灯泡会有亮度的 10%。有趣的是，当电灯泡接入，机器会获得速度，发电机会损耗电池更少的电能！点亮 75 瓦的灯管证明几瓦的有用输出，只用极小瓦的输入。

I swear the above statements are true and accurate to the best of my knowlegde.

我发誓上面的陈述是真的并精确的，根据我最好的知识。



第 7 章-附加宣誓书

非重点

第 8 章 在理解这种科技系统有用的类比

Chapter 8 ANALOGIES USEFUL IN UNDERSTANDING THE TECHNICAL SYSTEM

"A new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it."

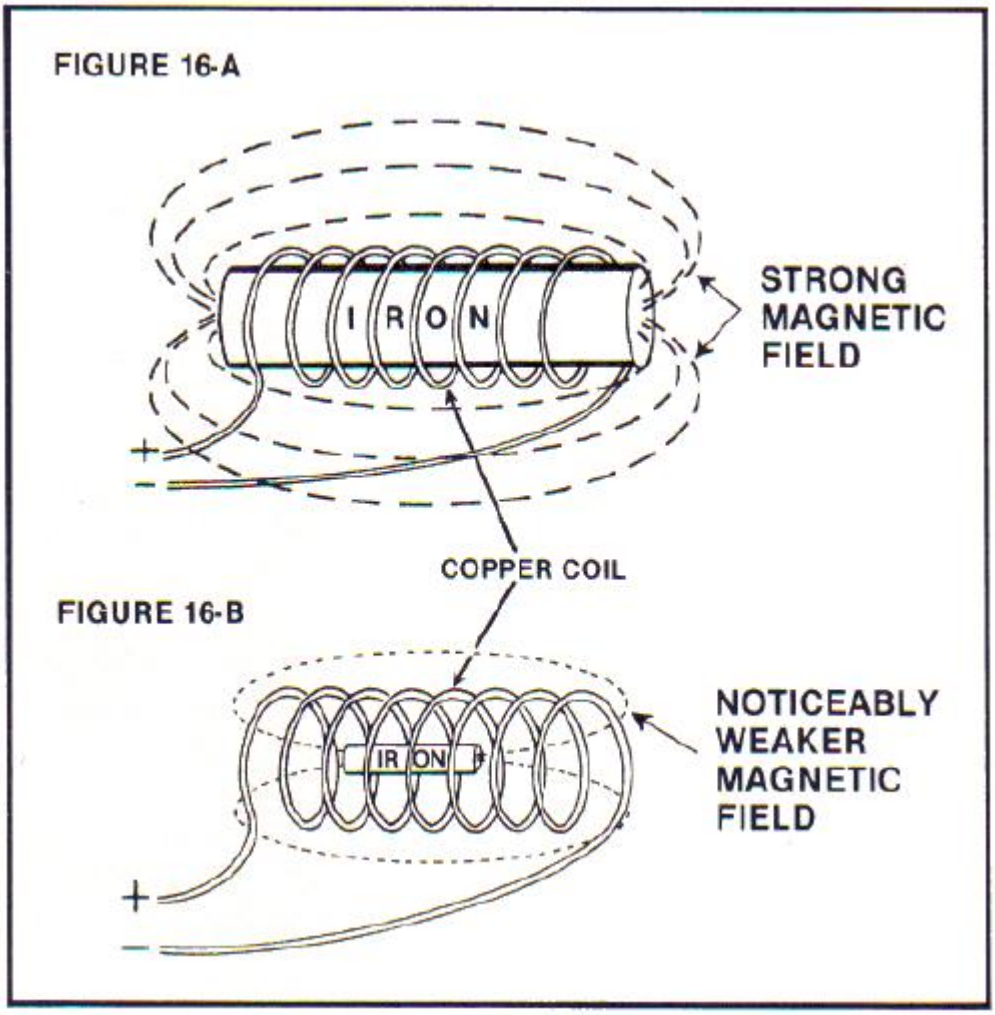
- Max Planck

I will now discuss in greater detail "how " and "why" my conduct ing-coil-unit operates.

我将讨论更详细的细节“如何”和“为什么”我的线圈装置工作。

16. Let us study another analogy (see 16-A and 16-B below):

16.让我们学习另一种类比：



If 1 amp of current goes into Figure 16-A , a noticeably larger magnetic field occurs than in Figure 16-B (for the same current input).

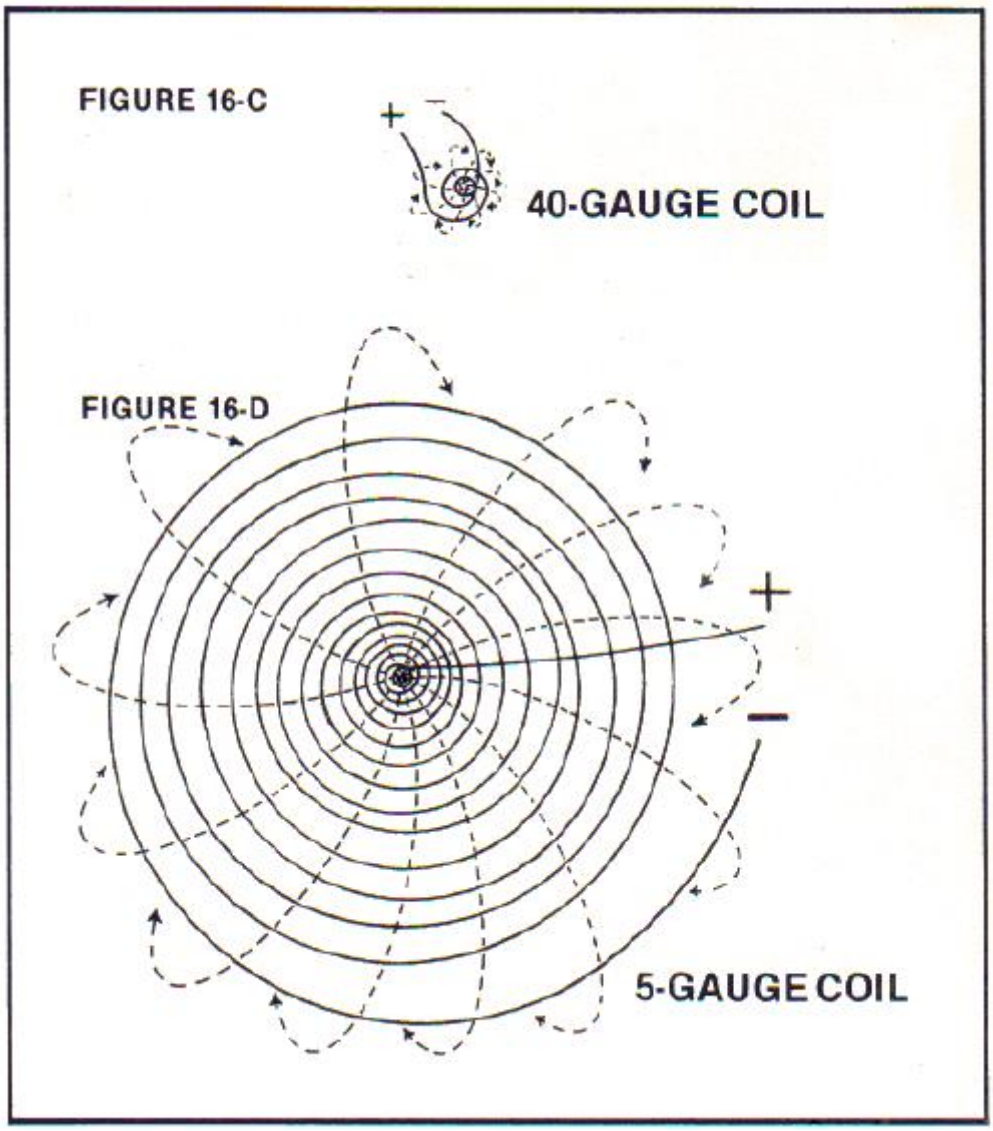
如果 1 安电流流入图 16-A，一个可见的大磁场区域产生并强于图 16-B（同样电流输入）。

QUESTION: Why the large difference in the strength of the magnetic field?

问题：为什么在磁场区域的强度有这么大的区别?

ANSWER: Simple. We have already demonstrated that the iron becomes magnetic due to atom alignment. Therefore, via the small electrical input acting as a catalyst, we have simply caused more atoms to align in the larger mass of iron in Figure 16-A above than in the smaller mass of iron in Figure 16-B.

回答：简单的，我们已经证明铁带有磁性归因于原子排列。因此，用小输入电流作催化剂，我们很容易引起图 16-A 中更大质量的铁比图 16-B 小质量的铁更多原子排列。



If 1 amp of current goes into Figure 16-C, a noticeably smaller and weaker magnetic field occurs than in Figure 16-D.

如果 1 安的电流输入图 16-C，一个显示的比图 16-D 更弱小的磁场区域产生了。

QUESTION : Why the difference?

问题：产生不同的原因？

ANSWER: Simple . As we have already proven, we have more copper atoms to align in coil 16-D than in coil 16-C.

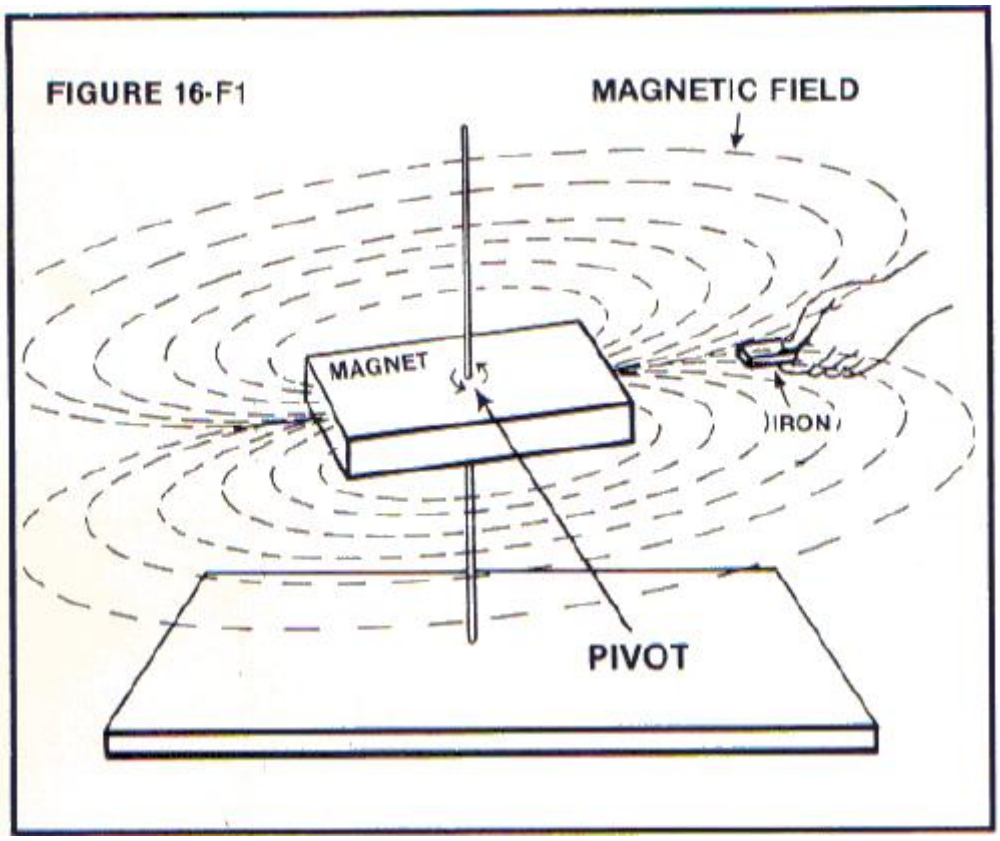
回答：简单说。如我们已经证明的，线圈 16-D 比线圈 16-D 有更多的铜原子要排列。

E. All of the facts presented in Sections 1-16 clearly prove that the current (consisting of gyroscopic particles in motion) put into a conductor simply acts as a catalyst in aligning the atoms of the conductor itself. This same catalytic effect is observed if a conductor is wrapped around iron and the current runs through the conductor. In other words, the current simply acts as a "pure catalyst!" The current input triggers the atom alignment which resulcs in energy (gyroscopic particles) being released from the atoms aligned. However , the electrical current input does not participate in the magnetic field released.

E.在 1-16 中展示的所有实事清楚的证明电流（由运动的陀螺子组成）输入到导体中只简单作为催化剂来排列导体本身的原子。同样的催化效果在绕铁导线和电流穿过导体时被观察到。也就是说，电流只简单作为“单纯的催化剂”！电流的输入引发原子排列，这导致能量（陀螺子）从排列的原子释放。然而，输入的电流没有参与磁场的释放。

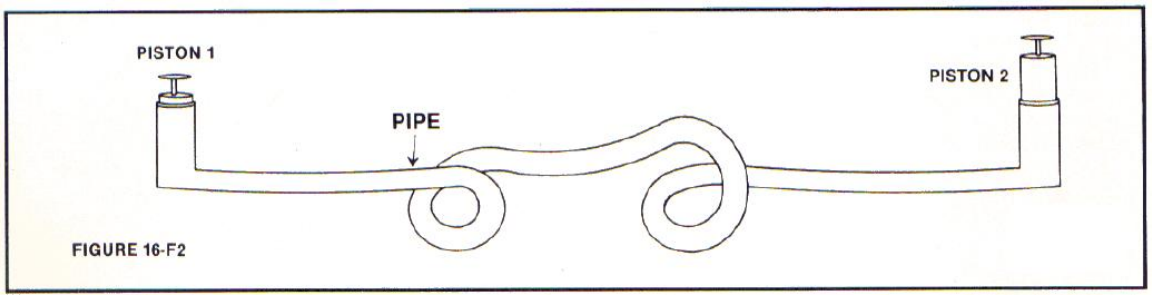
F. There is another important mechanical effect of the gyroscopic particles comprising a magnetic field, electric field , and all matter, which I refer to as a "Hydraulic Effect." (See Figun: 16-F I.)

这是组成磁场、电场、所有物质的陀螺子另一个重要的力学影响，我参考一种“水压效果”。



lf one places a piece of Iron in a magnetic field and the source (magnet) is fixed to a pivot (see Figure 16-F1 above), then, lf the piece of iron is moved, the magnet will also attempt ro move. It is mechanically obvious that there is a magnetic "coupling effect " generated by flowing "streams or shells" of gyroscopic particles comprising the magnetic field and originating from the atoms of the magnet. I originally asked myself: "How else could there be an action-reaction effect?" Any motion whatsoever on the part of the piece of iron will cause an attempted motion of the magnet itself. This action is the same type of effect as found in a hydrnulic system. (Sec Figure 16 f2.)

如果放一块铁片到一个磁场中，并且源（磁铁）固定在一个轴上（看图 16-F1），之后，如果移动这块铁片，磁铁也有移动的趋势。这是明显的力学行为，由陀螺子形成的“流或壳”产生的磁“耦合效应”，陀螺子来自磁铁原子并组成磁场。我问自己：“这种相互作用是怎么产生的？”铁片的任何运动都会引起磁铁自身试图运动。这种反应和水利学系统和效果是同一类型。



If the pipe is filled wih fluid and the piston is moved, then piston 2 will also move. lf the pipe is filled with a gas and piston 1 is moved, then piston 2 will also attempt to move. However,enough pressure can be imposed on piston 2, causing the gas molecules to compress into a smaller area within the pipe. The same effect can befound in magnetics.

如果管道充满液体，活塞运动会带动活塞 2 同样运动。如果管道充满气体并且活塞 1 在运动，之后活塞 2 将试图运动。然而，足够的压力加到活塞 2 上，会引起气体分子压缩到管道中一个小的区域。同样的效果可以在磁场中发现。

F. The same type of hydraulic effect can be observed in the electric current (gyroscopic particles) coming from a battery or generator and flowing into a conductor to align the atoms within the conductor. The atoms of the conductor are aligned due to the pressure of the voltage from the battery or generator. The current (gyroscopic particles) that is derived from the atoms of the material within the battery or the atoms within the conductor and magnet of the generator is the energy which comprises the

atoms of the material from which the current (gyroscopic particles) originates. The gyroscopic particles actually create a hydraulic effect back to the atoms from which the gyroscopic particles come. This action is mechanically similar to any hydraulic pumping system.

F. 同样的水压效果也可以在电流（陀螺子）中观察到，电流来自电池或发电机，注入一个导体导致导体原子排列。导体的原子重排归因于电池或发电机的电压的压力。电流（陀螺子）源自于电池原料中的原子或发电机导体和磁铁内的原子，陀螺子组成产生电流（陀螺子）的物质的原子。陀螺子实际上创建了一种

"The current input triggers the atom alignment which results in energy (gyroscopic parti cles) released from the atoms aligned. However, the electrical current input does not participate in the magnetic field released."

“电流的输入会引起原子的排列，被排列的原子会释放能量（陀螺子）。然而，输入的电流不参与磁场的释放。”

H. There is a most important distinction, however, between the power source of conventional hydraulic systems and that which I have discovered and developed. The current (gyroscopic particles) which comes from a battery or generator is the energy which comprises the atoms of the materials from which current (gyroscopic particles) comes. This action is literally the mechanical essence of Einstein's Equation $E = MC^2$.

H. 然而，在传统的水压系统和我发现的系统之间能量来源有很大不同。来自电池或发电机的电流（陀螺子）来自组成材料原子的能量。字面上意义是 $E = MC^2$ 等式的力学本质。

Therefore, a battery connected to the proper output system will be destroyed in accordance with $E = MC^2$! I am not referring to the present, inefficient chemical reaction within a battery, since present teachings state that all energy producing devices (which use current) operate via the current input only. This is not true!

因此，连接到合适输出系统的电池将以 $E = MC^2$ 的方式消耗自己的能量！我不是指当前、无效率的电池内的化学反应，当前学说规定所有的能量产生装置（使用电流）的运转只由输入电流驱动。这是不正确的!

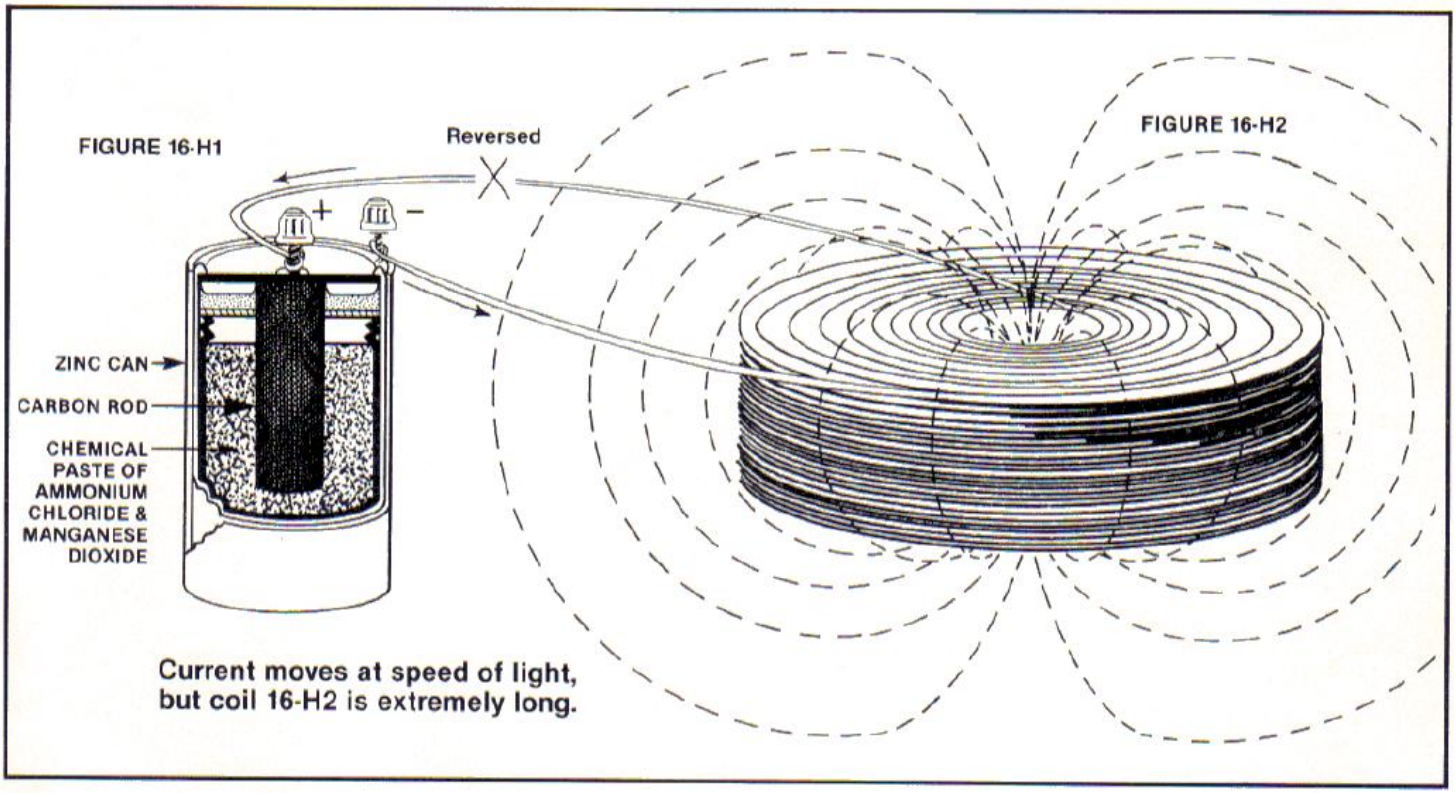
Such present teachings have resulted in designs for inefficient battery devices which are deliberntely constructed to use relatively high current. I teach the opposite. One should build devices to use as little current as possible and practical in order to restrict that current from completing the circuit and returning to the battery or generator.

这样的当前学说导致低率的电池装置设计，故意构建用高电流对流。我教的正和这相反。我们应该构建用尽可能小的电流来限制电流完成电路环路回到电池或发电机。

注：意思是不让电流完成一个回路，如电子不从电池负极到正极，这样产生的能量是消耗的物质，按 $E = MC^2$ 产生。

EXAMPLE: Let's examine a typical battery - an electrochemical cell. These devices operate according to Faraday's Laws. Faradav' s First Law states that the quantity of electricity that passes through a solution is proportional to the quantity of substance decomposed. You will note that this action is solely dependent upon the current (gyroscopic particles) completing the circuit. If the current (gyroscopic particles) does not complete the circuit, there will be no quantity of substance decomposed . (See Figures 16-H1 and 16 -H2.)

例如：让我们看一种经典电池-电化电池。这些设备遵守法拉第定律运行。法拉第第一定律：电解时，在电极上析出或溶解掉的物质的重量，与通过电极的电量成正比。你将注意到这种行为仅仅依靠电流（陀螺子）完成电路循环。如果电流（陀螺子）没有完成电路循环，将不会有等比的物质析出或溶解。



Re-examine the coil in Figure 15-B and then compare it to that in 16-H1 and 16-H2 above. Envision that if coil 16-H2 is composed of 5-gauge copper wire with such a length that its resistance is 1,000,000 ohms and the battery voltage of 16-H1 is 1000 volts, then only 1 milliamp of current could flow through coil 16-H2 and complete the circuit to return to battery 16-H1. It is obvious that the energy within the magnetic field of coil 16-H2 would be tremendous, and, if the direction of the current was reversed by a commutator (or similar mechanism) at position (X) above,before the current of 1 M.A. passed through the coil, then no decomposition of the battery by chemical means would occur. However, the hydraulic effect of the 1000 volts from battery 16-H1 would have already affected (catalytic effect) and aligned many atoms within coil 16-H2. Such alignment would generate a tremendous magnetic field (gyroscopic particles). When the current was reversed within coil 16-H2 by the pressure of 1000 volts from battery 16-H1,the induction effect would have far greater power than that which originally came from battery 16-H1 on a chemical basis only. If you, the reader,have now mastered what I have taught, you will quickly recognize that the action- reaction effect within coil 16-H2 and the hydraulic effect of battery 16-H1 all operate in accordance with E = MC2.

再次检查图 15-B 里的线圈并和上面 16-H1 和 16-H2 里的对比。想像如果 16-H2 由 5-gauge 有铜线组成，长度使电阻有 1,000,000 欧, 16-H1 电池电压是 1000 伏, 那么只有 1 毫安的电流能流过线圈 16-H2 完成电路循环返回到电池 16-H1。很明显，线圈 16-H2 中的磁场能量将是极大的，如果电流被换向器（或类似机理）在位置(X)反向，在 1 毫安电流通过线圈前, 那么电池中将没有化学反应发生。然而, 16-H1 电池 1000 伏的水压效果已经影响 (催化剂效果) 并排列了 16-H2 线圈中的许多原子。这样的排列将产生一个极大的磁场区域（陀螺子）。当电流在 16-H2 线圈被反向，通过电池 16-H1 的 1000 伏电压，感应效果将产生一个比来自只以化学为基础的电池 16-H1 更大的能量。如果你，读者，现在已经精通我所教授的，你将可以很快的认识到线圈 16-H2 和电池 16-H1 的水压效果的相互作用都遵守 $E = MC^2$ 的方式运行。

"One should build devices to use as little current as possible and practical ..."

In effect , the current (consisting of flowing, gyroscopic particles) coming from the atoms of coil 16-H2 and battery 16-H1 are the mechanical essence of $E=MC^2$ and, consequently, the mass of the entire system will be reduced via E =MC2 as energy is removed from the system. However , due to the high conversion efficiency within the process, it would actually require an extremely long period of time - measured in years - to significantly deplete the mass of the materials involved in the system.

实际上，电流（由流动的陀螺子组成）来自于线圈 16-H2 他电池 16-H1 是 $E=MC^2$ 的力学本质，因此，整个系统的物质将遵守 $E=MC^2$ 的方式减少并转换为能量。然而，由于这个过程转换效率如此之高，耗尽系统中的物质需要极长的时间（以年计）。

It should be obvious to you that the electric current (gyroscopic particles) which emanates from the elements of battery 16-H1 is not deplete d in coil 16-H2. If permitted, not only would the battery input current align the atoms of coil 16-H2, but once the current returns to the battery, such current would,according to Faraday's First Law, chemically decompose large quantities of matter compared to the minute size of the current (in the form of gyroscopic particles) which activates the undesirable chemical reaction.

很明显，电池 16-H1 发出的电流（陀螺子）没有在线圈 16-H2 里消耗。如果许可，不仅电池的输入电流排列线圈 16-H2 的原子，而且一但电流返回电池，电流将遵守法拉第第一定律，化学析出和电流（陀螺子的一种形式）等量的大量物质，激活这种让人讨厌的化学反应。

These gyroscopic particles obey the First Law of Thermodynamics precisely: **it appears they cannot be destroyed and it appears they possess a motion of infinite duration.**

这些陀螺子精确的服从热力学第一定律（注：能量守恒和转换定律)：能量是永恒的，不会被制造出来，也不会被消灭。

17. You, the reader, must now obtain the proper perspective within your mind. (See Figures 17-A and 17-B.)

17.你们，读者，在你的思想中现在必须形成正确的观点。(看图 17-A 和 17-B.)

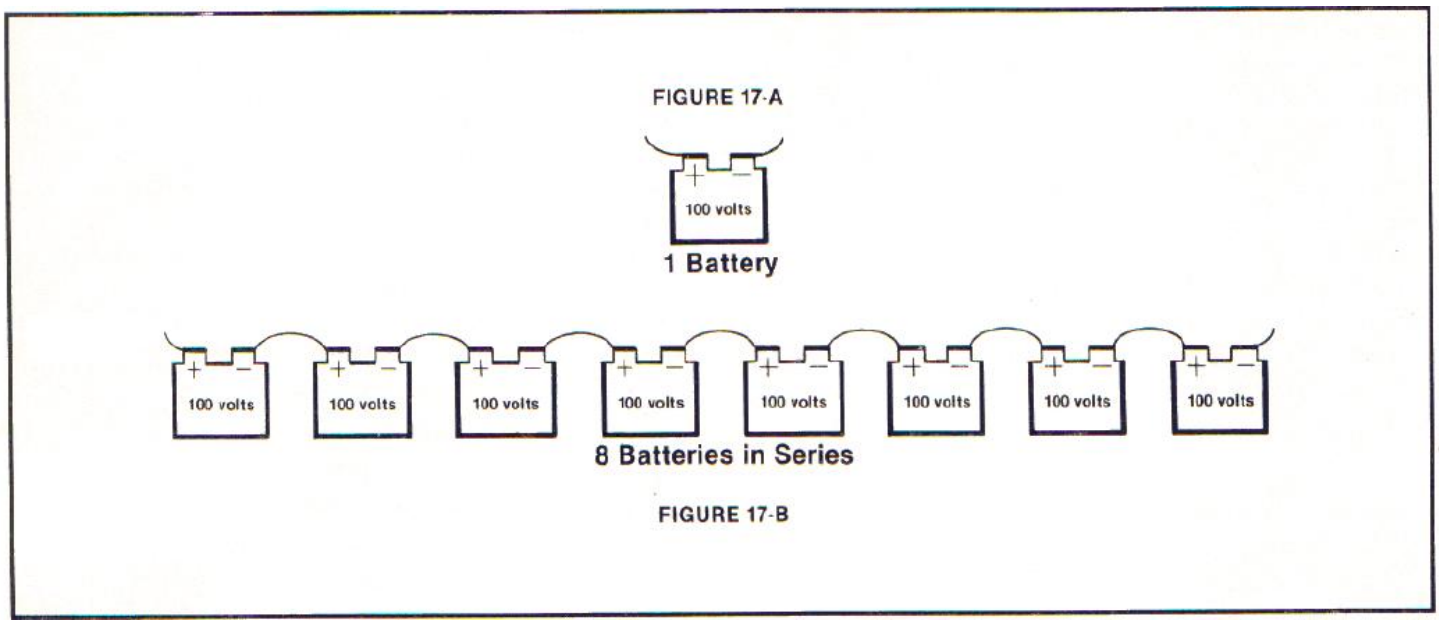


FIGURE 17-A

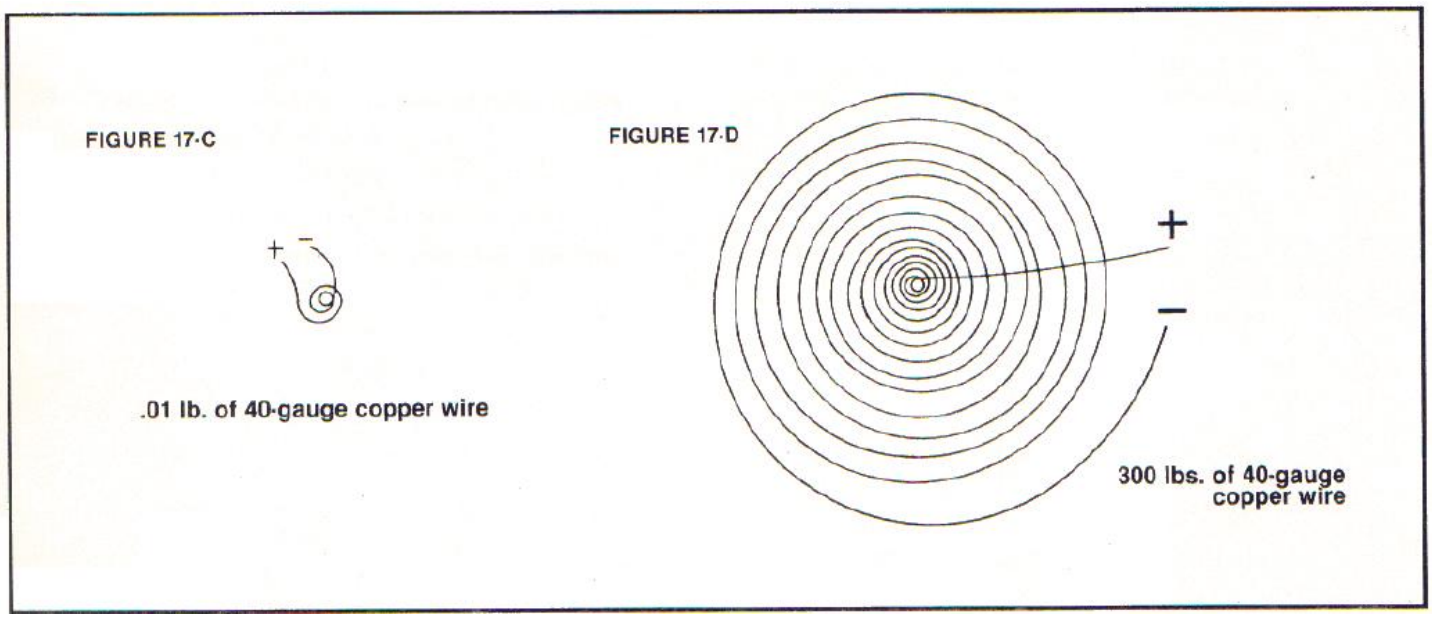
FIGURE 17-B

What distinction do you instantly detect between Figures 17-A and 17-B? You should recognize that one obtains greater energy from 17-B than from 17-A. You should recognize this fact on a chemical basis. However, you should also see that this distinction between Figures I 7-A and 17-B can also be visualized according to E = MC2 if properly understood and utilized .

你马上观察到图 17-A 和 17-B 有什么不同？你应该认识到我们可以从 17-B 获取比 17-A 更多的能量。你应该认识到这实际是基于化学反应基础上的。然而，你同样应该看到图 17-A 和 17-B 的区别也直接遵守 $E = MC^2$，如果正确的理解和应用。

Now examine Figures 17-C and 17-D:

现在比较图 17-C 和 17-D:



What difference do you recognize between Figures 17-C and 17-D? You should immediately recognize that there are 30,000 times more atoms in Figure 17-D than in 17-C. And you sbould also recognize that these atoms are – in effect -extremely small batteries (see Figures 17-A and 17-B above), except that there is no chemical reaction on an electrolytic basis. Rather, what occurs is action according to E = MC2 via the efficient conversion of magnetic mass (gyroscopic particles traveling throughout the space surrounding aligned atoms - also referred to as "magnetic energy") to electrical energy (gyroscopic parcicles traveling through a conductor)*. If the technical system is properly utilized, one should not be surprised that an energy output can be achieved which is in excess of the external energy input. Consequently, one should instantly recognize that one can obtain greater energy from coil 17-D than from coil 17-C.

你认为图 17-C 和 17-D 有什么不同？你应该马上认识到图 17-D 比 17-C 多 300000 倍的原子。你同样应该认识到这样原子是-实际上-极小的电池（看图 17-A 和 17-B），没有基于电解的化学反应。相反，发生的是遵守 E = MC2 活动，通过转换磁场物质（原子周围空间运动的陀螺子-也可以说“磁场能量”）为电能（穿过导体的陀螺子）*。如果这种科技系统被恰当的应用，我们将不会再惊叹输出的能量多于输入的能量。因此，我们应该马上认识到线圈 17-D 比线圈 17-C 可能获取更多的能量。

*Note: referring to energy as "electrical" or "magnetic" without understanding the essential nature of such energy can be conceptually misleading.There exists only one (mechanical) concept of eneryg :gyroscopic particles in motion. This single concept of energy can be observationally manifested in different forms: when traveling through a comluctor (metal wire) , the gyroscopic particles are commonly called "electrical" energy. When traveling throughout the space surrounding aligned atoms,the same gyroscopic particles are perceived as "magnetic" eneryg.

*注意：关于能量是“电能”或“磁能”，没有对这种能量基础理论的理解会产生概念上的错误。这里只有一个能量的（力学）概念：运动的陀螺子。这个单一的能量概念能明显的成为不同的形式：当穿过一个收集器（金属线），陀螺子是通常叫的“电”能。当穿过排列原子的周围空间，同样的陀螺子被认为是“磁”能。

If one calculates the resistance in Figure 17-D compared to that of Figure 17-C, one finds the resistance of 17-D to be approximately 30,000 times the resistance of 17-C. Note that this fact coincides with my previous statement that the conducting coil 17-D contains 30,000 times more atoms than conducting coil 17-C.

如果我们计算对比图 17-D 和 17-C 的电阻，会发现 17-D 的电阻大约是 17-C 的 30000 倍。注意，实个事实和我陈述一致，线圈 17-D 比 17-C 多 30000 倍原子。

However, to greatly increase the desired results, return to tests 15-A and 15-B. You will find in those tests that the resistance in 15-B is equal to that of 15-A, but within the coils of these two tests the number of atoms in each vary greatly . This difference is due to the fact that conducting coil 15-B has a phenomenal 110,704,968 times more atoms than conducting coil 15-A.

然而，为了增大预期的结果，回到实验 15-A 和 15-B。你将发现这些实验中 15-B 中的电阻和 15-A 相等，但这两

个实验的线圈的原子相差很多。这种不同是由于导体线圈 15-B 比导体线圈 15-A 多 110,704,968 倍原子。

"...for a given current input ... the most efficient conducting system design is one in which the greatest number of atoms within a coil are aligned by the given current (gyroscopic particle) input."

"…对于给定的电流输入…最有效的传导系统设计是线圈中最多数量的原子被输入电流（陀螺子）排列。"

18. At this point , it should be clear that for a given current input (consisting of gyroscopic particles) from a battery, generator, etc., the most efficient conducting system design is one in which the greatest number of atoms within a coil are aligned by the given current (gyroscopic particle) input.

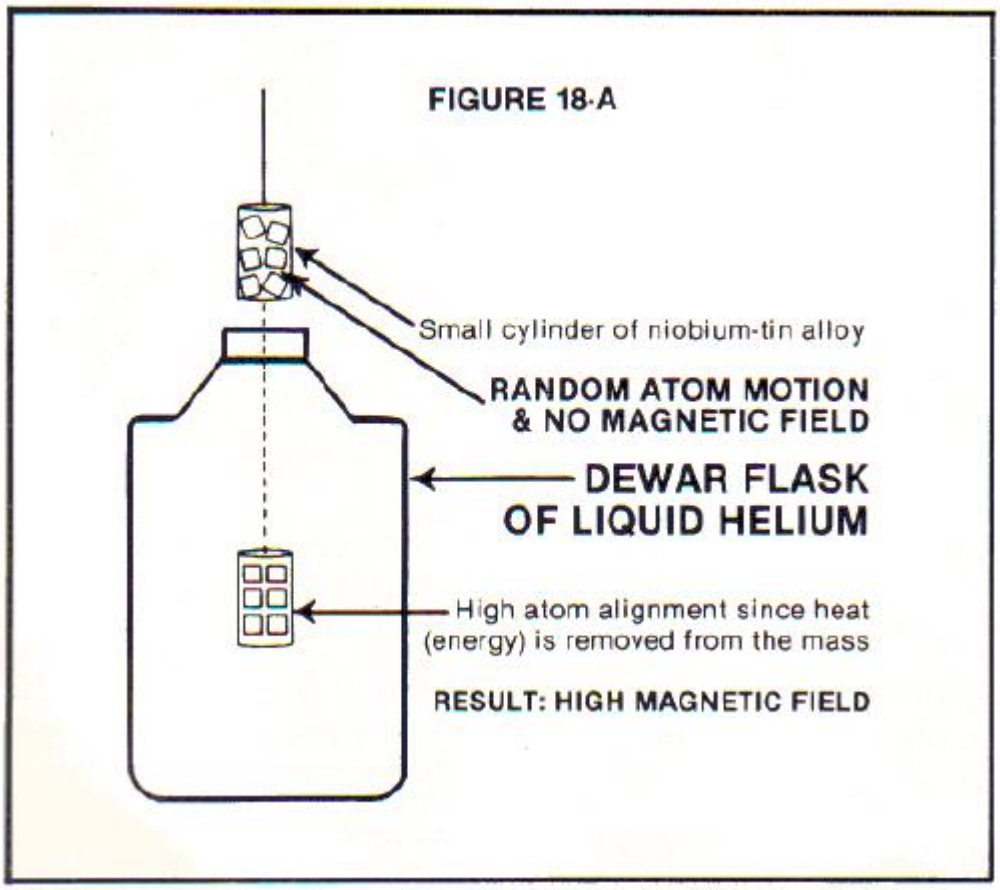
18. 基于这种观点，显示的，对于一个来自电池、发电机等的给定输入电流（由陀螺子组成），最有效的传导系统设计是线圈中最多数量的原子被输入电流（陀螺子）排列。

It is therefore obvious that a properly designed , super-conducting system would produce even greater results . As of this writing, work is being performed by other scientists in an attempt to develop a super-conducting material which can operate at temperatures higher than those previously developed.

因此，显然一个恰当的设计，超导系统将产生更好的结果。正如所写，这将被试图发展可以在高温中工作的超导材料的科学家实现。

A. Let us examine super-conducting magnets in view of what I teach . In Figure 18-A, when a small, fist- sized cylinder of niobium-tin alloy is placed in a flask of liquid helium having little or no current input, the cylinder becomes a formidable magnet of 24,000 gauss. Additional materials have been developed that are capable of producing superior results.

A.让我们用我所教的内容调查一下超导磁体。在图 18-A，当一个小的，拳头大小的铌-锡合金圆柱放入一个通往少量电流或没电流的液氦瓶中，圆柱体变成有 24000 高斯的强磁体。另外已有材料可以产生更强的效果。



What is significant in Figure 18-A is the fact that when the small cylinder of niobium -tin alloy is removed from the liquid helium, the alloy instantly loses its formidable, magnetic field .

在图 18-A 重要的是当从液氦瓶中移出铌-锡合金圆柱时磁场会瞬间消失的事实。

The reader should quickly recognize that in test 18-A, the niobium -tin alloy initially possessed energy (heat) which was removed from its mass when placed in liquid helium . This heat loss instantly results in a large reduction of the random atom motion within the alloy and therefore a high percentage of the alloy's atoms then align to release some of their electromagnetic energy (gyroscopic particles) throughout the formidable, magnetic field created .

读者应该马上认识到，在实验 18-A 中铌-锡合金圆柱拥有的最初能量（热）在放入液氦时从物质中移出了。热量的瞬间消失大量的减少了圆柱内自由原子的运动, 因此圆柱很大一部分原子排列释放一些它们的电磁场能量 (陀螺子), 创建一个强大的磁场区域。

注：热散失，原子自由运动减少，原子排列，磁场出现

You can easily see that this cryogenic process is opposite to the Curie temperature effect of heat input (energy) into a permanent magnet resulting in atom unalignment , i.e., increased random atom motion, and virtual disappearance of the magnet 's field. (See Figure 12-D2 on page 9 for comparison .)

你可以很容易看到这个低温进程相反的现象-居里温度的影响，热量（能量）进入永磁体导致原子失序，增加原子自由运动，磁场消失不见。(看第 9 页图 12-D2 的比较)

If the small, cylindrical, niobium -tin alloy is removed from the liquid helium, then heat (energy) travels into its mass from the environment which results in a significant increase in the random motion of the atoms within its mass. This action creates the disappearance of the magnet's prior magnetic field since the gyroscopic particles which previously composed the magnetic field have now returned into the original atoms from which they came. [These results scientifically match those of test 12-D above.]

如果铌-锡合金小圆柱从液氦里取出，热量（能量）会从环境进入到其中的物质里，导致其中原子自由运动的增加。这导致磁场的消失，组成磁场的陀螺子返回到释放它们的原子中。[这些结果科学的匹配上面 12-D 实验。]

"... I stress that it is essential that one design and establish the correct geometric configuration."

“…我强调，设计和建立正确的几何构型是必要的。”

19. For optimal results, I stress that it is essential that one design and establish the correct geometric configuration! With such a correct configuration , the atoms of the substances involved will intersect the gyroscopic particles (composing the magnetic field of the system) at the proper angle. In some designs it may be desirable that those atoms within the system do not (or minimally) intersect the gyroscopic particles, i.e., in such instances, only gyroscopic particles should mechanically interact with one another.

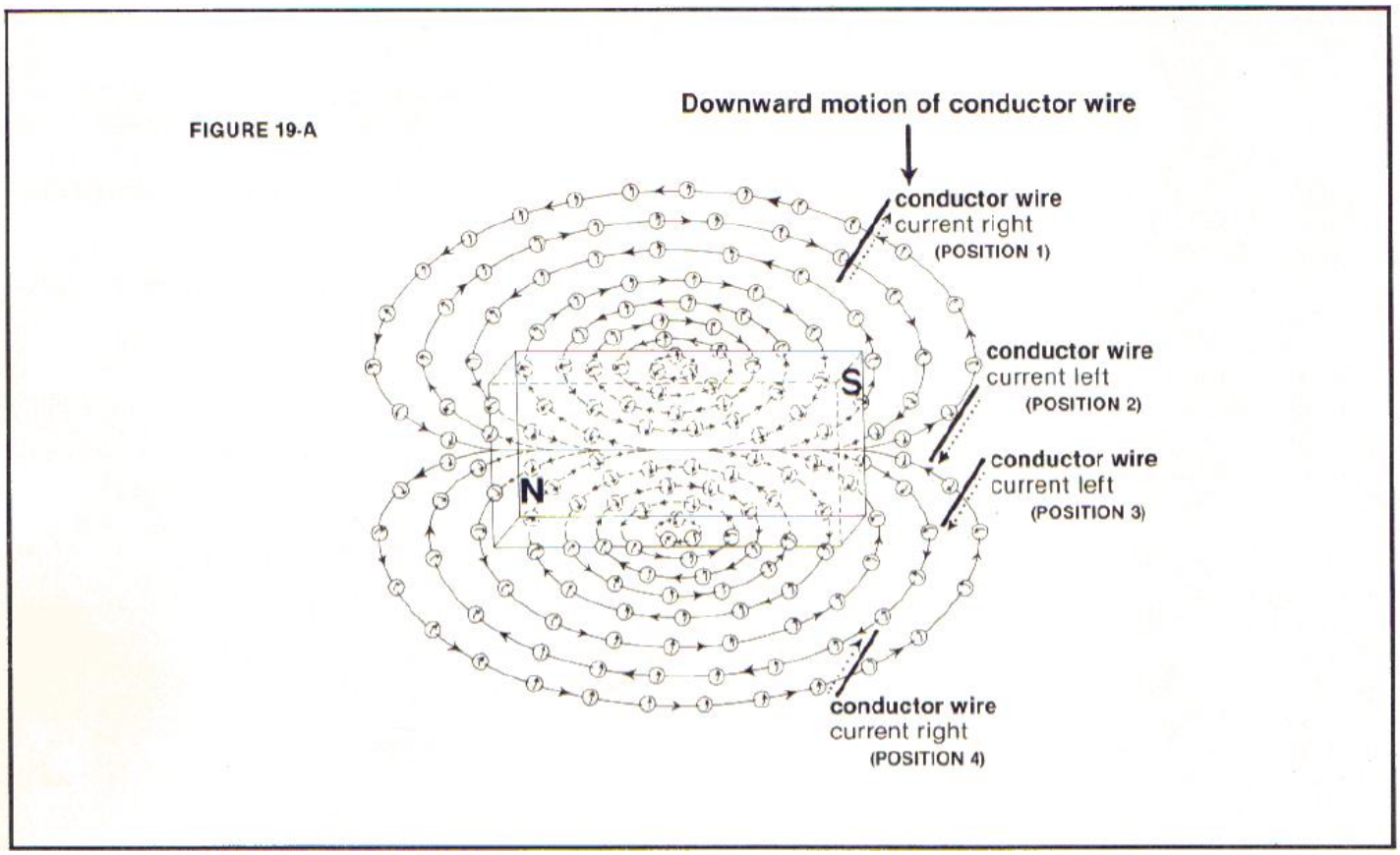
19.为了最优的结果，我强调设计和建立正确的几何构型是必要的! 有了正确的构型，复杂物质的原子将以恰当的角度横穿陀螺子（组成系统的磁场区域)。在有些设计中，也许系统中的原子不要（少量）横穿陀螺子是需要的，如只有陀螺子将物理上与另一个交互。

"One must pay strict attention to the mechanical essence of the gyroscopic action of these particles ..."

“我们必需严格注意这些粒子陀螺运动的本质…”

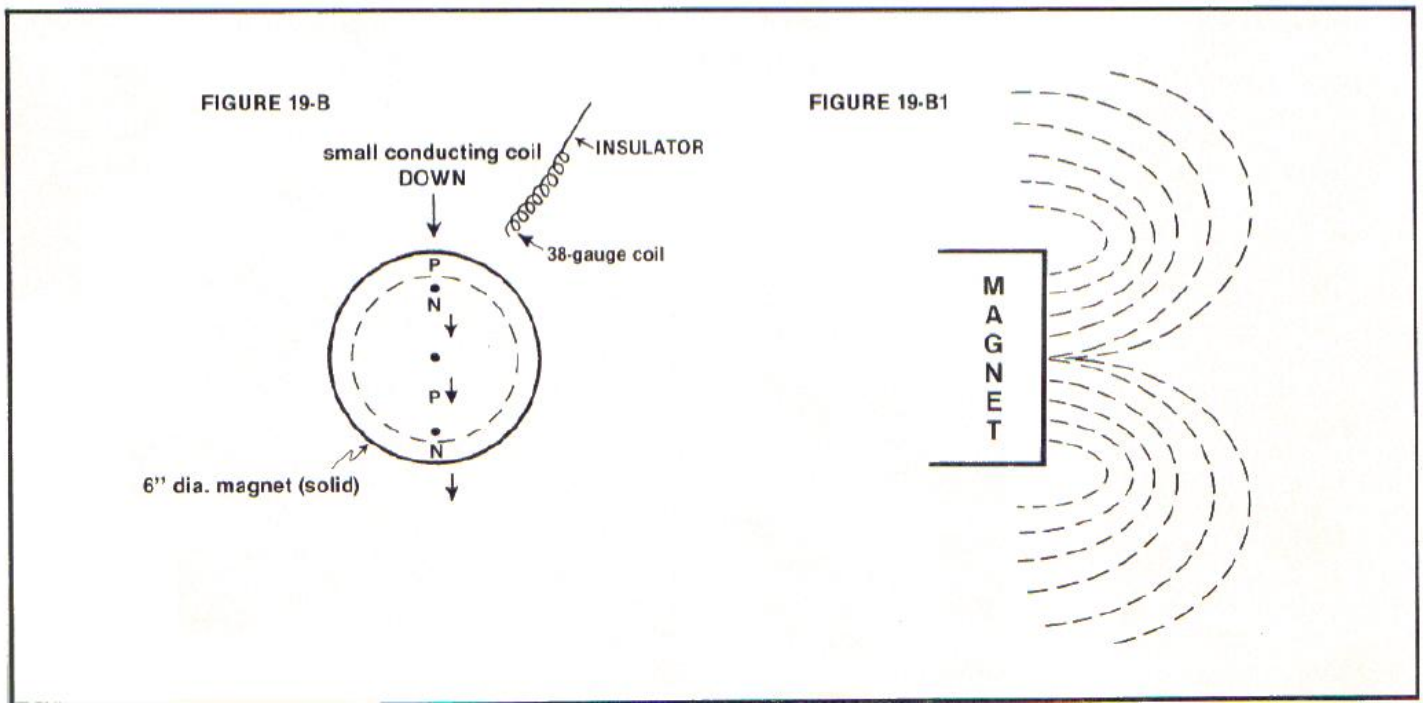
One must pay strict attention to the mechanical essence of the gyroscopic action of these particles moving in a magnetic field and emanating from the atoms of the substances involved in the process. Such gyroscopic particles are the mechanical essence of the equation E = MC2 . (See Figure 19-A.)

我们必需严格注意这些粒子陀螺运动的本质，它们在磁场中运动，从影响的物质的原子发出。这样的陀螺子是等式 $E = MC^2$ 的力学本质。(看图 19-A)



When a conductor is physically moved down and across a magnetic field as in Figure 19-A , then the current will change direction twice. The same is true if the conductor is moved from the South end of a magnet to the North end of the magnet. Reason: the direction of gyroscopic action is changing throughout the "lines (shells) of force. " However, if a small, multi-looped, 38 -gauge conducting-coil-wire [approximately 11/32-inch in diameter and 3/4-inch long] is moved across the end of a 6 inch diameter magnet, the current direction will alter four times. (See Figure 19-B.)

当一个导体向下穿过磁场区域如图 19-A，电流将改变两次方向。如果导体从磁体南极移动到磁体北极也是一样的。原因：陀螺运动的方向在“力线（壳）”上改变了。然而，如果一个小的，多回路的 38 –gauge 导体线圈（大约直径 11/32 英寸，长 3/4 英寸）穿过 6 英寸的磁体，电流方向将改变 4 将。（看图 19-B）



By moving the 38-gauge, copper-wire coil across the end of the magnet (as shown in Figure 19-B), the current direction will now change four times. [P = positive and N= negative.] It is extremely important to recognize that the "lines (shells) of

force" (gyroscopic particles) continuously vary in their exact direction at any given moment. Study Figure 19-B1 above and observe that the angular direction of the "lines (shells) of force" (gyroscopic particles) vary from the Center of the magnet to the left, in one plane of the magnetic field, and to the right, in the opposite side of that same plane .

通过移动 38-gauge 的铜线圈穿过磁体的尾部（如图 19-B 所示），电流方向将改变 4 次。[P 正极，N 负极。]这对理解“力线（壳）”（陀螺子）在任何时刻方向的精确连续变化是非常重要的。学习上面图 19-B1 并观察“力线（壳）”从磁体中间到左边磁场同一平面的角方向的变化，和到右边，同一平面的反面。

Also observe that at the points marked with a dot(•) in Figure 19-B above, there is no current produced even though the moving, small coil is never parallel with the "lines (shells) of force." Reason : This occurs as a result of a cancellation effect, i.e., one side of the small coil is located within one plane of gyroscopic particles possessing a given angular direction, while the opposite side of the small coil will be located in another plane of gyroscopic particles possessing a different angular direction. The identical effect will be observed if the small coil is moved from the North to the South end of the magnet .

同样，观察上面图 19-B 用点标记的位置，即使在运动也没有电流产生，小线圈从来没有与“力线（壳）”平行。原因：这种结果是因为抵消效果，即，小线圈的一侧在给定角方向陀螺子平面的一侧，小线圈相反一侧在有不同角方向的陀螺子的另一个平面。等同的效果是如果小线圈从磁体北极移动到南极尾部。

The reader should understand that I did not observe the above results by accident. On the contrary, I utilized the small diameter coil because 'expected that it would more effectively detect the varying angles of the gyroscopic particles involved. The results I obtained totally corroborated my expectations. It should now be obvious to you that relative to a magnetic field , the angular directions of the gyroscopic particles are of extreme importance with respect to a substance's given geometric design.

读者应该明白，我不是偶然观察到的以上结果。相反的，我利用小直径线圈是因为期望更有效的检测被影响的陀螺子的角度变化。我得到的结果完全和我期望的一致。现在，明显的，和磁场相比，陀螺子的角方向对于物质的几何设计是极重要的。

I would anticipate that computer technology - which is pictorally capable of depicting the mechanical essence of the action/reaction, gyroscopic effect of energies -would be very helpful in predicting more efficient designs and in computing useful mathematical formulas.

我预见到，计算机科技-有能力描绘能量陀螺效应运动/反应的力学本质-将是非常有助于预测更有效的设计和推导有用的数学公式。

What should not be done is for one to simply "throw together " some design concept and then place it in a magnetic field without giving careful consideration to the mechanical essence of the energy of that magnetic field, i.e., the mechanical essence of the energy (in the form of gyroscopic particles) comprising the atoms of the substance or substances of the design . Prior to my work, a lack of mechanical thought has been the norm, and, as the reader is well aware, the progress of science and the human race has suffered.

不应该简单的将一些设计概念拼凑到一起之后放到磁场而不考虑磁场能量的力学本质，即组成设计的物质原子的能量（陀螺子的形式）的本质。我之前的工作，？？？

I stress to you, the reader, that there are many designs which will effectively release the energy in a magnetic field in accordance with the conversion of the mass from which the magnetic field emanates via E = MC2.

强调一下，读者，有许多设计可以有效的释放磁场中的能量，遵循 E = MC2 将磁场释放的物质转换为能量。

The electromagnetic composition of the atoms of materials which initiates an input current flow is constant, is similar to hydraulic pressure, and appears to move at the speed of light. In addition, such input current behaves solely as a catalyst in interacting with the electromagnetic nature of the atoms comprising other materials and caused such atoms to release a portion of their electromagnetic energy in the form of a magnetic field composed of gyroscopic particles. Such action increases the capacity of the system for performing "Obvious" or "Unobvious" Work, Force, or Power. The system can then react with another magnetic force or the atoms (gyroscopic particles) of that source to multiply this electromagnetic effect even further.

发出输入电流的物质中原子的电磁结构是连接的，和水压相似，以光速移动。另外，这样的输入电流的行为仅仅如催化剂与组成其它材料的原子的电磁性交互，引起这引起原子以磁场形式-由陀螺子组成-释放一部分它们的电磁能量。这种行为增加了系统输出“可见”或“不可见”功、力、能量的能力。之后系统能与其它磁场力或原子（陀螺子）交互，使电磁效应更长久。

Let 's examine the facts which corroborate the previous statement:

A. I have already proven that the greater the number of atoms aligned within a magnet, the greater the release of the magnet's energy (gyroscopic particles) in accordance with the equation E = MC2 . (See Figures 20-A1, 20-A2, and 20-A3.)

让我们看哪些事实能证实上面的观点：

A. 我已经证明磁体中更多数量的原子排列会释放更多的磁能（陀螺子），遵循 E = MC2。（看图 20-A1, 20-A2, and 20-A3）

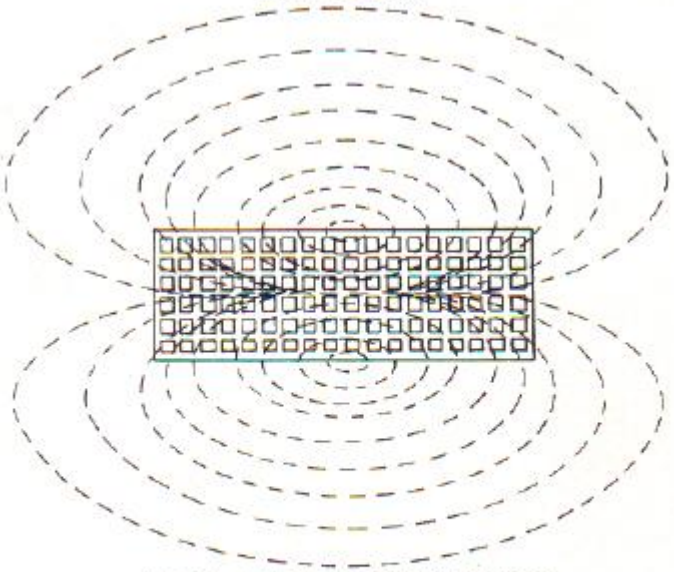
FIGURE 20-A1

No Magnetic Field

FIGURE 20-A2

Magnetic Field

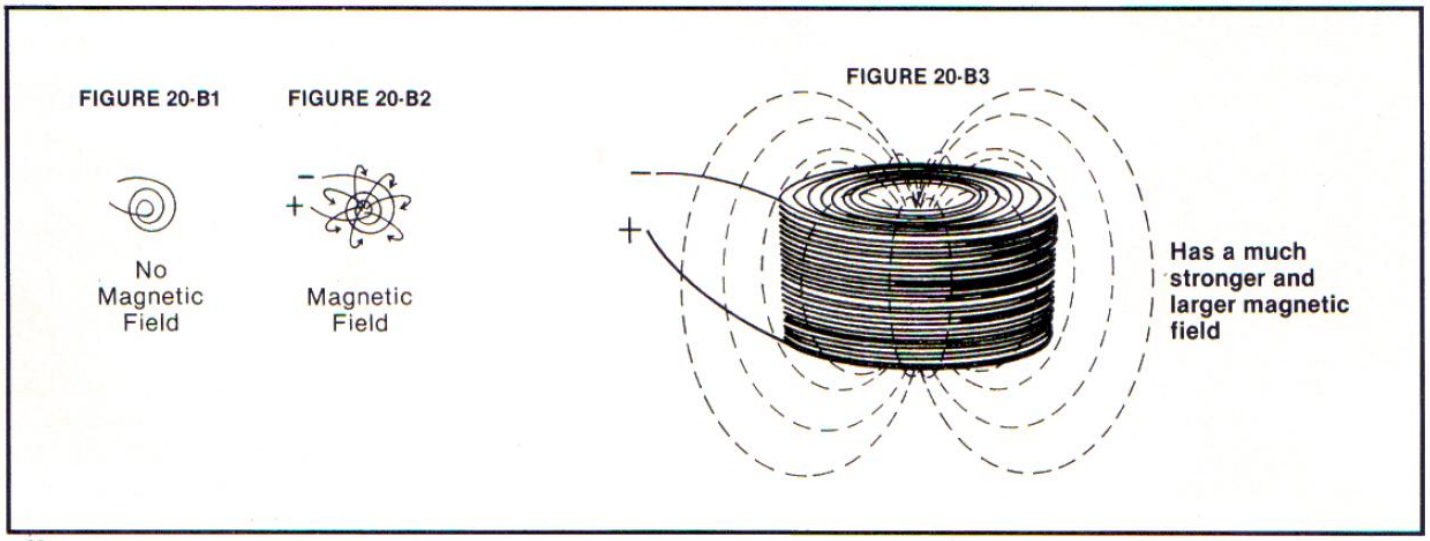
FIGURE 20-A3



HAS A MUCH STRONGER AND
LARGER MAGNETIC FIELD

B. I have already proven that the more atoms aligned within a conductor, the greater will be the release of the energy contained within that conductor (in the form of gyroscopic particles) in accordance with the equation E = MC2. (See Figures 20-B1, 20-B2, and 20-B3.)

B.我已经证明导体中更多的原子排列会释放导体中更多的能量(以陀螺子形式), 遵循 E = MC2。(遵循 20-B1, 20-B2, and 20-B3.)

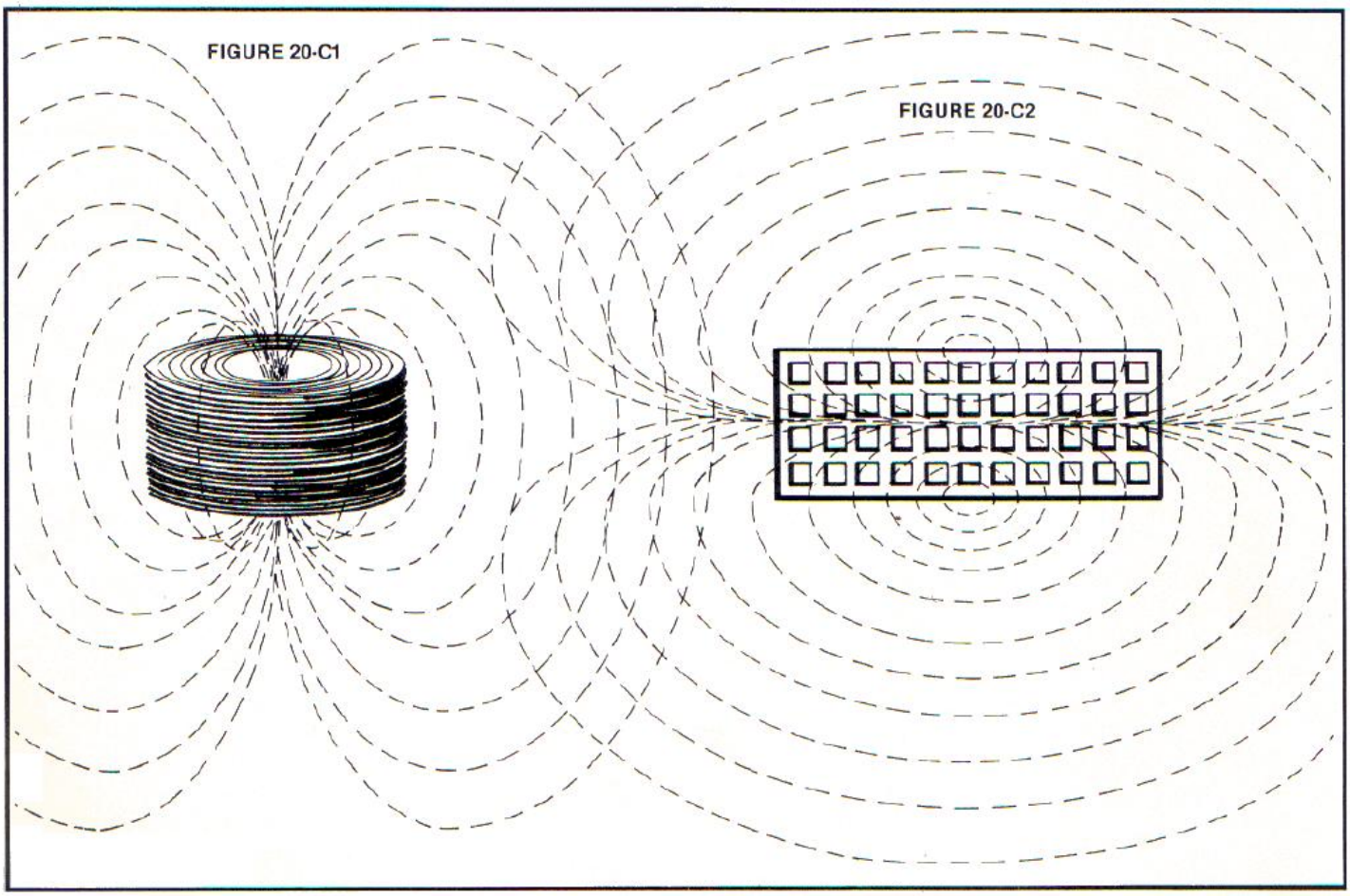


C. I have already proven that one should perceive the individual atoms (of Figures 20-A3 and 20-B3) as microscopic batteries with an energy capacity equivalent to E = MC2 . Realizing these facts, one then knows that the greater the number of atoms of any substance which one activates in accordance with these teach ings, then the greater the energy release that can be expected. (See Figures 20-A3 and 20-B3.)

C.我已经证明，人们应该意识到单个的原子（图 20-A3 和 20-B3）是一个小电池，带有能量遵循 E = MC2。了解这些事实，之后人们知道更多用这些方法激发的物质原子会释放比预期更多的能量。(看图 20-A3 和 20-B3)

Refer back to Figure 15-B (on page 19) and imagine that Figure 20-B3 is of similar magnitude. Also, imagine Figure 20-A3 of proportional size and magnitude with Figure 20-B3. If these two systems (20-A3 and 20-B3) then react with one another, you will obtain the following: (See Figures 20-C1 and 20-C2.)

回到图 15-B（在 19 页），想像图 20-B3 有相同的级数。同样的，想像图 20-A3 与 20-B3 有成比例的大小和级数。如果两个系统（20-A3 与 20-B3）相互感应，你将得到下面结果：(看图 20-C1 和 20-C2)



One can easily envision a conductor coil 20-C 1 being the size of a domed stadium, and a magnet 20-C2 being larger than a giant redwood tree.

很容易想像一个导体线圈 20-C 1 变成运动场大小，一个磁体 20-C2 比巨杉还要大。

In some cases, it may be desirable to permit the gyroscopic particles emanating from magnet 20-C2 to efficiently interact with the gyroscopic particles surrounding the conducting coil 20-C1, but not to interact with the atoms contained within the conducting coil 20-C1 itself. With the proper mechanical configuration utilizing the gyroscopic particles, one would achieve maximum torque with magnet 20-C2 without creating back - emf or induction into conducting coil 20-C1.

在一些案例中，也许允许磁体 20-C2 发出陀螺子与导体线圈 20-C1 周围的陀螺子高效交互，但不与导体线圈 20-C1 包含的原子交互。用恰当的机械配制使用陀螺子，将得到最大扭转力，通过磁体 20-C2，也不用产生反向感应电动势输入到导体线圈 20-C1。

The reader must also realize that there is a hydraulic, "magnetic -coupling effect " of the gyroscopic particles comprising the magnetic fields -an effect which extends back to the atoms of the material from which the gyroscopic particles emanate. As a result, the Archimedian "Laws of Leverage" are enacted!

读者必须意识到，组成磁场的陀螺子有水力学的“磁耦合”效应-使发出的陀螺子返回到材料的原子中。

Knowing these facts, one can easily see that in Figures 20-C1 and 20-C2 there would be a phenomenal torque produced upon the masses of both 20-Cl and 20-C2. This phenomenal torque is the result of E = MC2!

知道这些事实，可以清楚的看到图 20-C1 和 20-C2 都会产生将产生扭转力的现象。这个扭转力现象是 E = MC2 的结果!

D. EXAMINE THESE FACTS: The massive number of atoms within conducting coil 20-C1 produce a phenomenal back-emf (power) which is greater than the external energy input (consisting of a catalytic effect only) or external power input. In addition, the massive number of atoms within magnet 20-C2 release via atom alignment a large quantity of kinetic energy (in the form of a magnetic field) which interacts with another large quantity of kinetic energy (in the form of a magnetic field)

within conducting coil 20-C1. Such interactions result in a phenomenal torque effect and either 20-C1 or 20-C2 (or both) could rotate .

D. 检验这些事实：导体线圈 20-C1 中大量的原子产生的反向电动势（功率）大于外部的能量（只产生催化剂效果）输入呀外部功率输入。另外，磁体 20-C2 里大量的排列原子释放大量的动能（以磁场的形式）与导体线圈 20-C1 产生的大量动能（以磁场的形式）相互作用。这种交互导致扭转力的产生，20-C1 或 20-C2（或两者）能旋转。

"The greater the voltage (hydraulic pressure), then the greater the number of atoms of a conductor will be triggered into the desired action. "

“更高的电压（水压），导体中会有更多的原子被激发产生期望的运动。”

Observe that the above mechanical configuration has multiplied the capacity of the system to perform "Obvious" or "Unobvious " Work, Force, or Power relative to the intial power input which acts only as a catalyst.

观察上面的机械布置，已经增加了系统产生“可见”或“不可见”功、力、功率的能力，相对于初始的仅起催化剂作用的输入功率。

Now, envision another conducting coil of proportional size which acts as a generator and is physically positioned to efficiently interact mechanically with 20-Cl and 20-C2. This configuration will increase the energy output even further.

现在，想像等比例的导体线圈作为发电机，放到与 20-C1 和 20-C2 交互最高效的位置。这种配制将增加更多的能量输出。

Such a configuration is exactly what I created with my primitive , handmade prototype. The prototype was not built for my benefit, but for the benefit of others who had been unjustly influenced by a teaching process which rewards memorization. It was also built for those who could not or would not recognize the validity of my Theoretical Process. (Again I refer to the discussion in 15-C and Figure 15-Cl .) All of the results described above were observed in the primitive prototype (described in 15-C and 15-Cl) except that the generating coil had only 300 lbs. of atoms. For more impressive results , the prototype should have contained 4,200 lbs. of atoms. I specifically limited the coil weight to 300 lbs., however, because I knew that high voltage would occur and that electrical-resistance -breakdown could also happen if the coil size became too great. These problems are technical problems which can easily be solved by present technology .

这样的构造恰恰是我创建的原始、粗糙的原型机。原型的建造不是为了我的利益，而是为了被死记硬背的教学方式影响到的人们。同样为不能认识到我的理论正确性的人们。（我指的是 15-C 和 15-C1 中的讨论）以上的讨论结果都是在原始的原型（15-C 和 15-C1 中的讨论）中可见的，除了只有 300 磅原子的发电线圈。为了更多深入的结果，原型应该有 4200 磅原子。然而，我特定限制线圈重量为 300 磅，因为我知道如果线圈尺寸太大将产生高电压并烧断电路。这些问题只是技术问题，现在的科技可以轻松解决。

The reader should clearly understand by now that if the electric current which is initially released from a battery is not permitted (by a conducting coil) to complete the circuit within the coil itself , then the total electromagnetic energy (gyroscopic particles) contained within the conducting coll will perform exactly as I teach. Ideally, one should construct the energy machine to have voltage (hydraulic pressure), but the input cur rent should (as much as practical) be prevented from returning to the battery, generator, etc. That current which flows from the conducting coil could indeed return to the battery and recharge it.

现在读者应该清楚的明白，如果电流是从电池释放是不允许（因为导体线圈）完成线圈的电路循环的，所有的导体线圈中的电磁场能量（陀螺子）将如我所说的那样工作。完美的方式是构建有电压（水压）的能源机，但输入电流应该（根据实际）不能返回电池、发电机等。流过导体线圈的电流最终回到到电池给电池充电。

E. One could reduce the length of a conductor and still achieve the desired results by simply increasing the speed of the "on" and "off' input current which behaves as a pulsating flow. The atoms of the conductor will produce a back-emf flow as a result of the expanding and collapsing magnetic field (composed of gyroscopic particles). These atoms are "triggered " into this observable, back -emf flow via the "catalytic" action of the small, initial input current.

E.可以通过增加输入电流“开”“关”的速度（注：直流脉冲的频率）来减少导线的长度并得到期望的结果。导线的原子将产生反向电动势，这是磁场（由陀螺子组成）创建和摧毁的结果。通过原始小输入电流的“催化”行为，这

些原子被“激发”产生明显的反向电动势。

The greater the voltage (hydraulic pressure), then the greater the number of atoms of a conductor which will be triggered into the desired action.

更大的电压（水压）会导致导体中更多原子被激发到期望的状态。

However, this statement should be qualified: the facts indicate that all atoms have a "threshold effect." If the "threshold effect" of the atoms (contained within a given diameter and length of a conductor) are exceeded, then the atoms will emit some of their electromagnetic composition (gyroscopic particles) in the form of heat with the result that the magnetic field would be greatly reduced. If this occurs, then one should simply increase the diameter of the conductor or increase the speed of the pulsating input current.

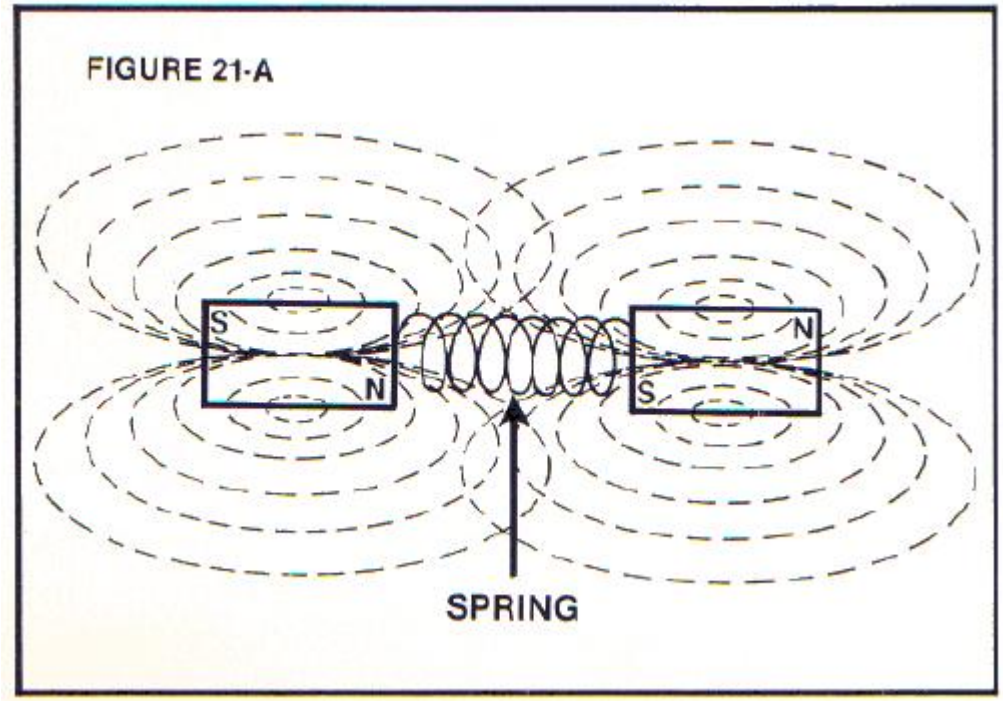
然而，下面的陈述应该是被证实的：事实指出，所有的原子有一个“阈效应”。如果原子（给定直径和长度的导体中）的“阈效应”值达到，原子将以热能的形式发出它们电磁组成（陀螺子）的一部分，这导致磁场将减少很多。如果这发生了，应该简单增加导线的直径或增加脉冲输入电流的频率。

Returning ,to the prototype in Figure 15-C1: this massive 5-gauge coil had only eight (8) ohms of resistance , yet it produced a tremendous back-emf (power) which reduced current-flow-input from the battery pack. When the input power from the battery pack was interrupted , the back -emf then returned more power than the original power input from the battery pack.

回到图 15-C1 的原型：这个很重的 5-gauge 的线圈只有 8 欧的电阻，然而它产生了极大的反向电动势（功率），这减少了电池组电流的流入。当从电池组的输入功率被完全阻止，反向电动势会返回比从电池组原始输入能量更多的能量。

There are those individuals who will ask the question: "Why can't one simply feed the generated, output current back into itself, eliminating the need for an input battery? " The answer is simple: The energy involved in this system (consisting of gyroscopic particles) is composed of real, mechanical entities which will work against themselves (as would unaligned gears) just as readily as they will work together in utilizing or generating power. (See Figure 21-A.)

有些人会问这样的问题：“为什么不能将输出的能量返回到发电机本身作为输入，去掉输入电池的需要？”回答是简单的：参与系统的能量（由陀螺子组成）是由真实的力学实体组成，它们将排斥本身（如无序的齿轮）就如它们一起工作利用或产生能量。(看图 21-A)



A. Envision that the above two magnets in Figure 21-A have a strong, magnetic field that is capable of compressing the spring. One would not expect the spring to then recoil and push the two magnets apart.

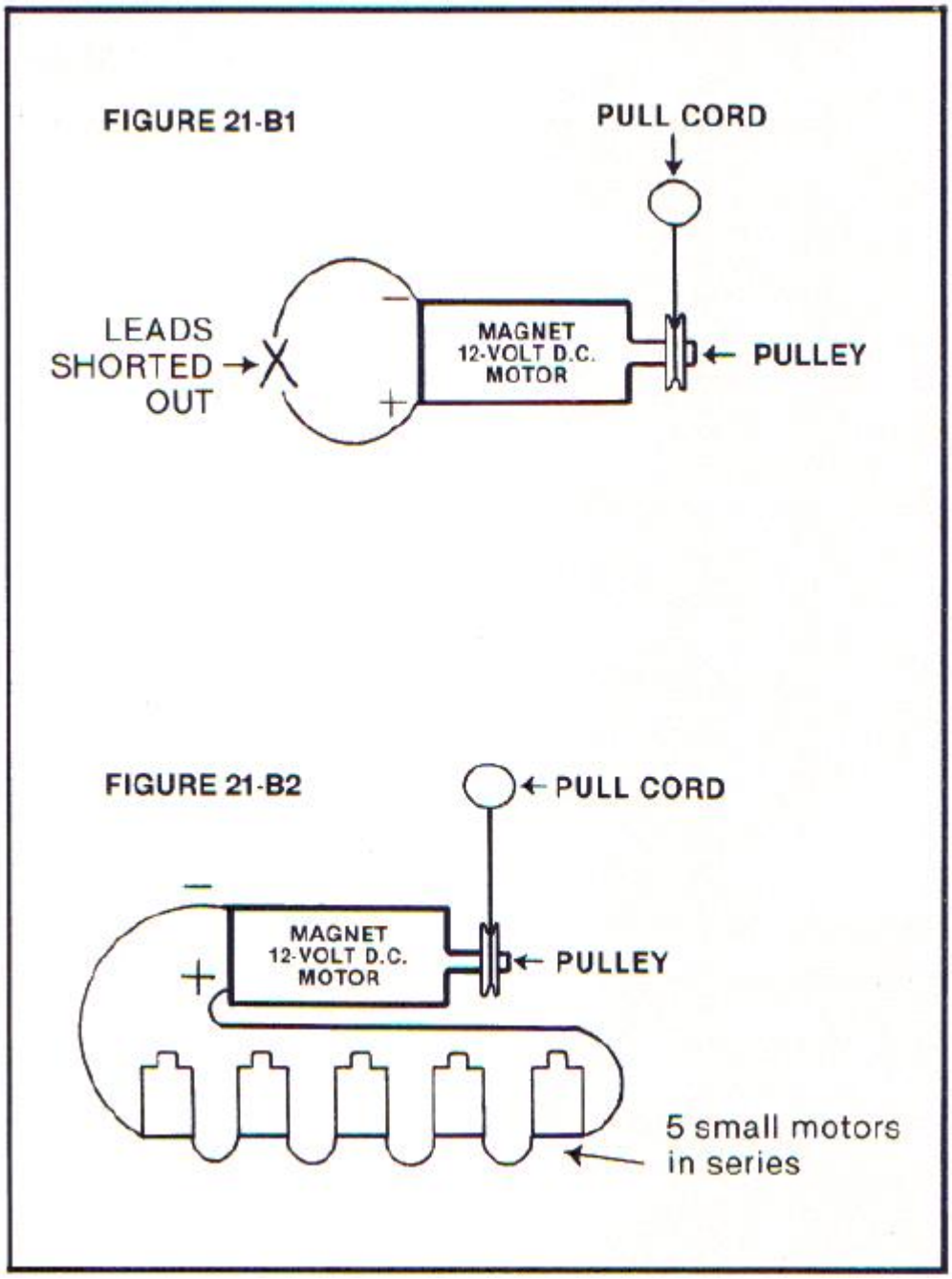
A. 想像以上图 21-A 两个磁体有很强的磁场区域，能压缩弹簧。没有人会期望弹簧会反推两个磁体分开。

Reason: The gyroscopic particles emanating from the atoms of the two magnets are the mechanical essence of E = MC2 and, consequently, such particles will keep the spring compressed. However, if one has a "triggering mechanism " or a catalytic effect that causes the atoms of one or both of the two magnets to align and unalign, then the spring would recoil, pushing the two masses apart. When the atoms are aligned, the spring would again be compressed via the generation of the magnetic field by the aligned atoms. This process would continue to repeat itself.

原因：两个磁体中的原子发出的陀螺子力学本质是 E = MC2，因此，这样的陀螺子将保持弹簧的压缩。然而，如果一个有“引发机理”或催化效果，能引起两个磁体中的原子排列和失序，那么弹簧将可以弹开并推开两个磁体。当原子排序，通过原子排列磁场区域的产生弹簧将再次压缩。这个过程将重复下去。

B. A similar effect (created by the gyroscopic particles via E = MC2) is observed when the current is prohibited from returning to a conventional generator. If a mechanical means is constructed to "trap" the electric current and prevent it from completing a circuit, then the gyroscopic particles of the current have a capacity for continuous work without the necessity to increase the power input from the generator system. However , if the circuit is complete and the electric current moving within the System performs no "Obvious" Work, Force, or Power, then the gyroscopic particles comprising the current will - upon returning to the generator -increase the need for greater power input into the system. Reason: Such action occurs as a result of the very fact that these gyroscopic particles are literally the "mechanical essence of E = MC2" and it appears they cannot be destroyed. This fact results in these gyroscopic particles having a "cumulative effect." (See Figure 21-B1 and Figure 21-B2.)

B. 一个相似的效果（遵守 E = MC2 由陀螺子创建）是电流禁止返回传统的发电机。如果创建一种机械构造“困住”电流，阻止它完成电路循环，那么电流的陀螺子有能力继续工作，不需要增加输入发电机的功率。然而，如果电路循环完成，电流的移动在系统中没有产生“可见”的功、力、功率，那么组成电流的陀螺子将-返回，发电机-需要更多功率输入系统。原因：这样的活动的发生是一个事实的结果，陀螺子是真实的“E = MC2 的力学本质”一旦产生就不可毁灭。这个事实导致陀螺子有“累积效应”。(看图 21-B1 和 21-B2)



In Figures 21-B1 and 21-B2, the depicted motor also acts as a generator. In 21-B1, if the leads are shorted out with only 1 ohm of resistance in the generator's conductor, there will be a resistive force equal to the pull -force that one exerts in pulling the pull-cord attached to the pulley on the motor (generator) shaft. Reason: The conductor cuts the magnetic field of the permanent magnets, thereby releasing gyroscopic particles (current) from the magnetic field. These released, gyroscopic particles which travel into the conductor then have their spin at right angles to the balance of gyroscopic particles (spin) remaining in the magnetic field which in turn generates an opposing "Obvious Force. " These gyroscopic particles continue to move throughout the shorted conductor as the conductor continually moves through additional "lines (shells) of force" within the magnetic field which, in turn, results in even more gyroscopic particles (current) being released within the conductor. This successive number of gyroscopic -particle - releases is what creates the "cumulative effect. "

在图 21-B1 和 21-B2 中，描绘的发动机同样如一个发电机。在 21-B1 中，如果两极是短路的，电机导线只有 1 欧电阻，如果一个人用力拉发动机（发电机）轴上的轮缠的线，将有一个阻力和拉力相等。原因：导线切割永磁体的磁场区域，因此从磁场区域释放陀螺子（电流）。这些释放的陀螺子将进入导线，使它们在正确角度旋转来平衡磁场区域中的陀螺子，给发电机一个相反的“可见力”。这些陀螺子持续穿过短路的导线，导线持续穿过磁场中额外的“力线（壳）”，依次导致更多的陀螺子（电流）从导体中释放。连续的陀螺子释放创造了‘累积效应’。

"This successive number of gyroscopic- particle-releases is what creates the 'cumulative effect. '"

“连续的陀螺子释放创造了‘累积效应’。”

One can easily prove this previous statement to be a fact by simply conducting an experiment. Observe that the harder one pulls on the "pull-cord" (in Figure 21-B1), the more the resistive force will equal your pull. [Frictional force is additional.]One can therefore easily observe that one is producing no "Obvious Work, Force, or Power “outside the system.

通过做一个简单的实验，可以容易的证明之前的陈述是实事。观察到，越用力拉“拉绳”（图 21-B1），越大的阻力将等于你的拉力。【摩擦力是除外。】因此很容易观察到系统外没有产生“可见功，力，动力”。

Observe above Figure 21-B in which five smaller, permanent -magnet motors have been placed in series. When one pulls the pull-cord, one finds that the required energy is significantly less than in Figure 21-B1 and yet all five additional motors will now be running. One is now producing " Obvious Work, Force, and Power" outside of the system and yet one is using significantly less input power. Why the difference? Answer: In Figure 21-B1, one is producing high current (volume of gyroscopic particles which acts as a "brake") and virtually no hydraulic pressure (voltage). However, in Figure 21-B2, one is producing high hydraulic pressure (voltage) and low current (volume of gyroscopic particles completing the circuit), therefore, the "braking effect" is drastically reduced.

观察图 21-B，五个更小的永磁体发电机串连在一起。当一个拉拉绳时，将会发现需要的能量明显小于图 21-B1，然而五个其它发动机将运行。拉力在系统外产生了“可见功、力、动力”，然而拉力用了更少的输入。为什么会有这种区别？回答：在图 21-B1，拉力产生了高电流（大量的陀螺子起“制动器”作用），几乎没有水压（电压）。然而，图 21-B2，拉力产生了高水压（电压）低电流（大量的陀螺子完成电路循环），因此，“制动效果”大大减少了。

Lenz's Law states that "the current induced in a circuit due to a change in the magnetic flux through it or to its motion in a magnetic field is so directed as to oppose the change in flux or to exert a mechanical force opposing the motion.”

注：楞次定律：感应电动势趋于产生一个电流，该电流的方向趋于阻止产生此感应电动势的磁通的变化。

Lenz's Law is simply an observation of this cumulative effect of the gyroscopic -particle-spin (comprising the current produced) being at right angles to the spin of the gyroscopic particles remaining in the magnetic field. Prior to my work, the true nature of the magnetic field has never been fully understood.

楞次定律是（组成产生的电流的）陀螺子在恰当角度旋转累积效应的简单观察，相对于磁场区域中的陀螺子的旋转。我先前的工作，磁场区域的原理从来没有完全的理解。

Returning to the question , "Why can 't one simply feed the generated, output current back into itself?" l would answer: If one blindly (via mechanical implicitness) feeds the current produced from a system back into itself , then a "braking effect" will occur which will negate the desired results.

加到问题，“为什么不能简单的将输出电流返回发电机本身？”我将回答：如果盲目的（通过机械方式）用返回产生的电流到自身，那么将会发生“制动效果”，这是不期望看到的结果。

It should be obvious to the reader that the prior teachings have indicated that all power produced from any type of conducting system was the result of current flow and was not from the conducting system itself. As a result of this view, all prior systems have been deliberately designed to utilize high current-flow to produce high power.

对读者来说明显的是传统的教学已经指明，任何类型传导系统产生的所有动力是电流的结果，不是传导系统本身。作为这种观点的结果，所有传统的系统已经被故意设计成利用高电流产生高动力。

If you have mastered my teachings up to this point, then you should be principally interested in the voltage (hydraulic pressure), since the current (gyroscopic particles) simply acts as a catalyst for any system into which it flows. As I indicated above, the gyroscopic particle composition of the current cannot be depleted as it moves through the system. As a result, the current completes the circuit to the generator and a "braking-action” occurs to create the cumulative effect. If the current was to complete the circuit and return to the battery, then such current would, according to Faraday's Law of Electrolysis (which depends upon current flow (gyroscopic particles]), produce an undesired chemical action and destroy one's ability to utilize the elements of the battery in accordance with E = MC2 .

如果你已经精通我在这点上的教学，你将主要对电压感兴趣（水压），因为电流（陀螺子）对任何流入的系统只起

简单催化剂作用。如我上面指出的，组成电流的陀螺子当穿过系统时不能被耗尽。作为结果，电流完成了电路循环返回发电机，并产生“制动效果”创建累积效果。如果电流完成电路循环返回电池，这样的电流将，根据法拉第电解定律（依靠电流流过[陀螺子]），产生一个不期望的化学反应并摧毁电池根据 E = MC2 输出能量的能力。

The very electrolytic action described by Faraday's Law is proof that the current within the system has not been depleted. With a correct technical system, such current could be harnessed for more productive purposes since the gyroscopic particles (which comprise the current) have an infinite capacity for work.

恰恰是法拉第定律描述的电解行为证明系统中的电流没被耗尽。在一个正确的技术系统，可以控制这种电流产生更多作用，因为陀螺子（组成电流）有无限做功的能力。

Via the proper design, it is obvious that one can feed the energy triggered and released from a system into a configuration which then operates itself and produces additional, excess energy in accordance with E = MC2 by converting the mass of the system involved.

通过恰当的设计，很显示，可以将从系统激发释放的能量输入一个配制，之后按 E = MC2 转换系统中的质量运行产生额外多余的能量。

This is exactly what I have clearly demonstrated by utilizing the primitive, handmade prototypes already discussed. (See Figures 15-C1 and 15-C2.) There are many additional, technical designs possible which will be built by following my basic principles.

我已经清楚的证明的是精确的，通过用原始的、粗糙的讨论过的原型。（看图 15-C1 和 15-C2）有许多另外的遵循我的基础原则的科学设计可能被建造。

22. I now wish to give you, the reader, a test. Have you understood literally what I have taught you? Or have you simply sought to memorize what I have written? I wish to stimulate you to understand the very "essence" of what I teach you! Only by doing so will you be able to "stand on my shoulders and see farther than I have."*

我现在希望给你，读者，一个测试。你已经真正明白我所教授的了吗？或者你简单的想记住我所写的？我希望你明白我教授你的“本质”使你兴奋! 只有这样，你才能“站在我的肩膀上比我看的更远。”

Question: How would you build a more efficient design than the primitive prototypes I have already demonstrated? What properties would you seek to perfect in your system?

问题：你如何建造一个比我已经展示原始原型机更有效率的设计？你将寻找什么特性来完善你的系统？

You should understand that if built structurally strong, even the 15-C1 and 15-C2 prototypes would produce an impressive power output if the hydraulic pressure (voltage) was increased. For example, in the smaller 15-C2 unit, I utilized only 300 volts of pressure due to the fact that as one increases the voltage (hydraulic pressure) then the power produced becomes damaging to the primitive commutator which I built by hand. Utilizing these 300 volts, I had only 1.6 milliamps input and a 14 lb. magnet which rotated at approximately 200 RPM. Now, if you add 100,000 volts (hydraulic pressure) to a system structurally designed to withstand the voltage -which is 333 times the original voltage I utilized to demonstrate my correct principle-then one can expect the power output to be in thousands of watts with an input of only several hundred watts. With such a system, the 14 lb. magnet would rotate at more than 50,000 RPM!

你将明白，如果建造够结实，如果水压（电压）增加甚至 15-C1 和 15-C2 中的原型将产生可观的能量输出。例如，在 15-C2 的更小的装置中，我用只有 300 伏的电压导致增加电压（水压）产生的能量能毁坏我建造的原始换向器。用 300 伏，我只用 1.6 毫安的输入，14 磅的磁体以大约 200 转每分钟的速度旋转。现在，你加 100000 伏（水压）到一个被设计可以经受这么高电压的系统-这是 333 倍于我用于证明我的原则的电压-那么可以期望输出能量达到几千瓦，而只用几百瓦的输入。用这样的系统，14 磅的磁体将有大于 50000 转每分钟的转速。

What I continually stress to you, the reader is that the handmade prototypes were simply built to prove that the Technical Process which I teach is correct. I consider the Technical (Theoretical) Process to be 10,000 times more important than those primitive prototypes. If you have mastered what I teach, then the magnitude of this "Pioneering Invention" should be obvious to you.

我持续强调，手工原型只是简单来证明我所教授的科技是正确的。我认为科技（理论）系统 10000 倍重要于这些原型。如果你已经精通我所教授，那么这个重要的“先进发明”对你来说是平淡无奇的。

第 9 章 能源机内部运行机制的解释和换向器设计的讨论

Chapter 9 EXPLANATION OF INTERNAL ACTION WITHIN MY ENERGY MACHINE AND DISCUSSION OF COMMUTATOR DESIGNS

"If you cannot make something simple, in the end you do not know what you are about."

- Dr. Edward de Bono

“如果你不能使事情变得简单，最后你不知道你做了什么。”

- Dr. Edward de Bono

A. Question: Do you understand the importance of physically designing a technical configuration which causes the current (consisting of gyroscopic particles) to be "trapped" within any system (including a conductor) utilizing the hydraulic pressure (voltage) of the input current and prohibiting such input current from detrimentally affecting the battery source of the input current? [If permitted (to a detrimental extent) to return to the battery source, such input current will operationally invoke Faraday's Law of Electrolysis and prevent the further utilization of the electrical energy (gyroscopic particles) within the battery in accordance with Einstein's equation of $E = MC^2$.]

A.问题：你明白设计一种可以在任何系统（包括一个导体）中“困住”电流（由陀螺子组成）的科技装置的重要性吗？通过利用输入电流的压力（电压）阻止输入电流对电池产生有害影响。[如果允许（到有害的程度）返回电池源，这样的电流会遵循法拉第电解定律，阻止电池遵循 $E = MC^2$ 等式利用电能（陀螺子）的持续性。]

B. QUESTION: Do you understand that the gyroscopic particles (current) emanating from the materials of a battery literally represent the mechanical essence of Einstein’s equation of E = MC2 and constitute the basic entities comprising all component parts (other and larger sub-atomic particles e.g., electron, proton, neutron, meson, neutrino, quark, etc.) within the atoms of the materials used in the construction of the battery?

B.问题：你是否明白从电池原料中释放出来的陀螺子（电流）真正代表 E = MC2 的力学本质，组成最基本的构成所有要素（其它较大次原子级粒子，如，电子，中子，质子，介子，中微子，夸克等,）的实体，这些要素组成电池中材料的原子。

If you do not instantly know the answers to questions 22-A and 22-B, then you have not "Mastered" what I have taught, and you must therefore re-read (and Master) the earlier sections of this Book before proceeding further.

如果你不能马上知道问题 22-A 和 22-B 的答案，那么你没有“精通”我所教授的，你必须重新读（并精通）这本书先前的部分。

However, if you do know the answers to questions 22-A and 22-B, then you should immediately understand why I designed (within the structure of my invention) a segmented commutator and brush system for the purpose of proving 1) my teachings are correct and 2) how quickly production units for practical use will result when my teachings are "Mastered" and not "Memorized.

然而，如果你知道问题 22-A 和 22-B 的答案，那么你应该马上明白，为了证明 1)我所教授的正确性和 2)当“精通”并“记住”我所教授实际构建一个可用装置是多么快，我为什么设计（我发明的内部结构中）一个分离的换向器和换向器电刷系统。

C. EXAMPLE: (See Figure 22-C1.)

C.解释：（看图 22-C1）

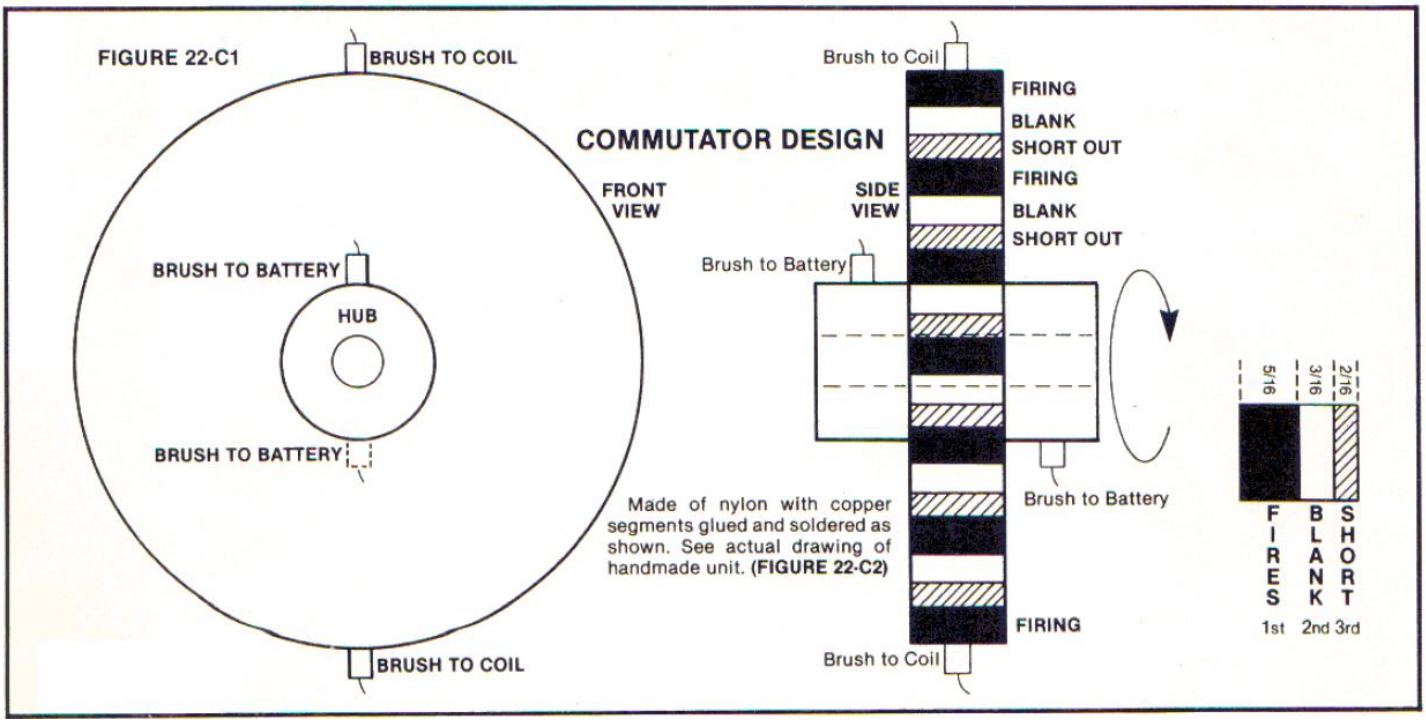
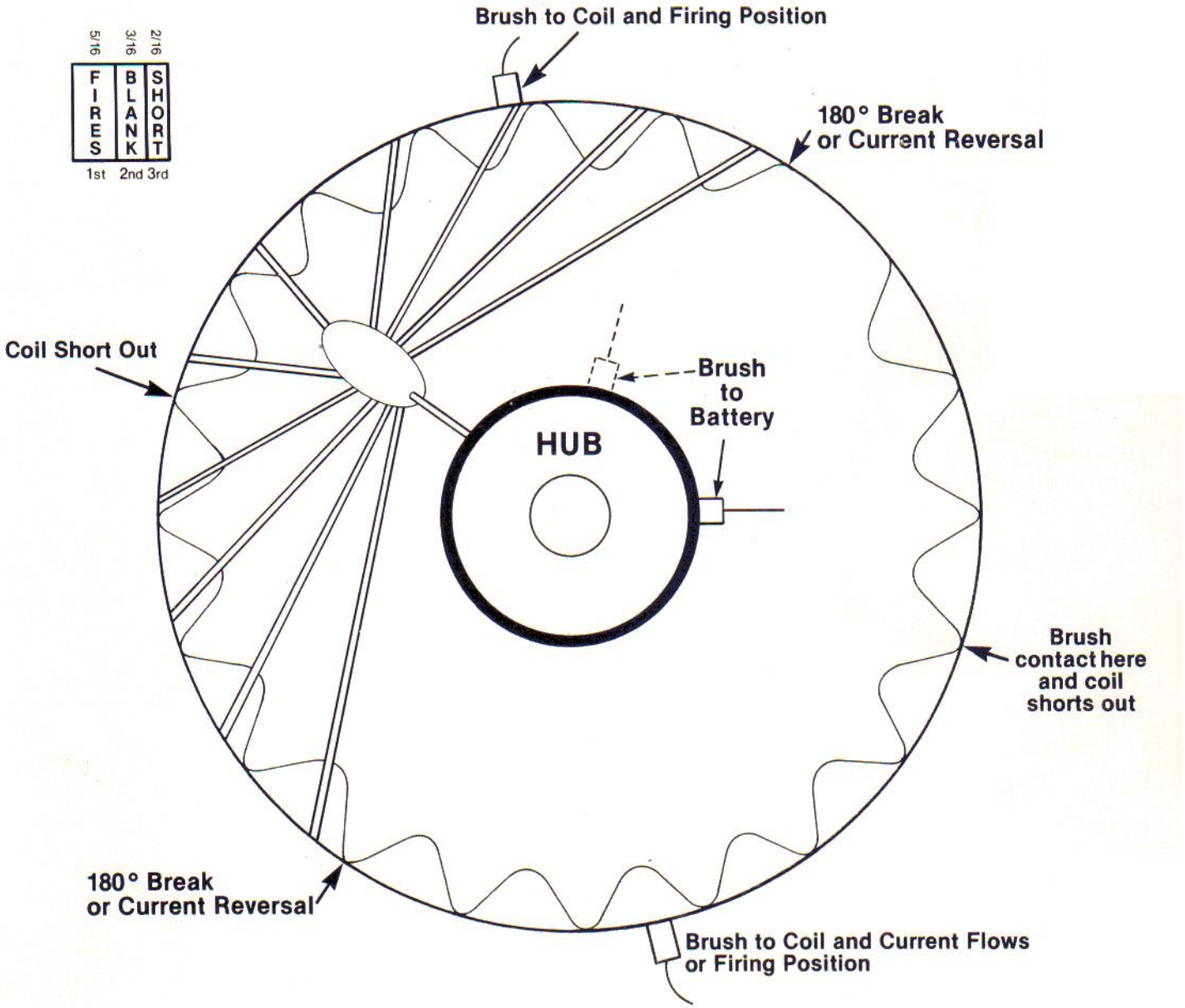


FIGURE 22-C1
BRUSH TO COIL
BRUSH TO BATTERY
HUB
BRUSH TO BATTERY
BRUSH TO COIL
COMMUTATOR DESIGN
FRONT VIEW
SIDE VIEW
Brush to Coil
FIRING
BLANK
SHORT OUT
FIRING
BLANK
SHORT OUT
Brush to Battery
Brush to Battery
FIRING
Brush to Coil
Made of nylon with copper segments glued and soldered as shown. See actual drawing of handmade unit. (FIGURE 22-C2)
5/16
3/16
2/16
FIRES
BLANK
SHORT
1st 2nd 3rd

FIGURE 22-C2

Commutator has 20 Current Input or Firing Positions 5/16'' wide, 20 Blank Spots 3/16'' wide, and 20 Short Out Positions 2/16'' wide.



Opposite side of Commutator is connected with Firing Wires to the Hub on the opposite side of the 180° Break. No Short Out Wire is needed on the reverse side.

注：上图中英文

Commutator has 20 Current Input or Firing Positions 5/16" wide,20 Blank Spots 3/16" wide, and 20 Short Out Positions 2/16"

wide.
Opposite side of Commutator is connected with Firing Wires to the Hub on the opposite side of the 180 ° Break. No Short Out Wire is needed on the reverse side.

D. QUESTION: Why does the commutator -at the points where it makes contact with the brushes connected to the copper coil -consist of segments? [Those hub or brush contacts connected to the battery interface with a continuous rim of copper.]

D.问题：为什么换向器-连接电刷和铜线圈-由不同部分组成？[这些轴或电刷触点用连续的铜边连接到电池表面。]

ANSWER: Simple, if you have "Mastered" my teachings to this point.

回答：很简单，如果你已经“精通”我所教授的。

The brushes connected to the copper coil make contact with the FIRING SEGMENT position on the commutator. At that precise moment, current (in the form of gyroscopic particles) flows from the atoms of the battery's materials into the copper-coil conductor as a result of the "hydraulic effect" [voltage]. As a "catalytic effect," such current-flow from the battery causes some of the atoms (within the copper-coil conductor) to align and release a minute portion of their electromagnetic configuration (in the form of gyroscopic particles) to generate an expanding magnetic field. As a result, some of these gyroscopic particles (within the expanding magnetic field) mechanically collide with a portion of the gyroscopic particles comprising other atoms within the copper-coil conductor. Some of these gyroscopic particles collide at a right angle, and those that do subsequently move at a right angle to that right-angular force. Such right-angular motion results in electrical current (consisting of gyroscopic particles) which moves in a direction opposite to the "catalytic" input current (gyroscopic particles) from the battery source. The electrical current (gyroscopic particles) generated by the above-mentioned, right-angular collisions essentially "traps" and prevents the battery current from completing the circuit. [Note: This right-angular motion of the gyroscopic particles occurs as an "after-the-fact" reaction, i.e., the right-angular motion occurs after the gyroscopic particles (comprising the expanding, magnetic field) collide with those gyroscopic particles remaining within the atoms of the conductor.]

连接铜线圈的电刷连接换向器上 FIRING 段的位置。精确到那一瞬间，电流（陀螺子形式）自电池材料中的原子流入铜线圈导体，这是“水压效应”[电压]的结果。作为“催化效果”，这样来自电池的电流引起一些原子（铜导体线圈中）排列并释放个小部分它们的电磁成份（以陀螺子形式）来产生一个扩大磁场。结果是，一些陀螺子（扩大磁场中）和组成铜线圈导体的部分陀螺子碰撞。一些陀螺子以直角碰撞，这些陀螺子随后在直角方向运动。这样的直角运动导致电流（由陀螺子组成）和从电池发出的“催化”输入电流相反方向运动。电流（陀螺子）由以上方式产生，直角碰撞运动本质上“困住”并阻止电池电流完成电路循环。[注意：这种陀螺子的直角运动是事实发生后的反应，如，直角运动发生在陀螺子（组成扩展磁场区域）和导体原子中陀螺子碰撞之后。]

“The power produced from the conducting coil within the system becomes significantly greater than the initial 'catalytic' power coming from the atoms of the materials comprising the external battery.”

“来自系统导体线圈的能量变得比来外部电池材料原子的初始‘催化’能量更多。”

At the next instant in the rotation of the commutator, the brushes - connected to the copper coil - move off the FIRING SEGMENT and pass onto the BLANK SEGMENT (or "dead-spot" position.) This new position breaks the "hydraulic effect" (input voltage) from the battery and thereby causes the atoms of the copper-coil conductor to unalign. Such atomic unalignment results in a collapsing, magnetic field and represents an attempt on the part of the gyroscopic particles (comprising the magnetic field) to return into the atoms from which they originally emanated. When this occurs, some of these gyroscopic particles comprising the collapsing magnetic field then collide at a right angle with some of the gyroscopic particles remaining within the atoms of the conductor. This right-angular collision occurs in a direction opposite to the right-angular collision which originally occurred when the magnetic field was expanding. As a result of the second collision, additional electrical current (in the form of moving gyroscopic particles) is produced in the conductor. Such current is now moving in the same direction as the original, "catalytic" input current (gyroscopic particles) from the battery.

换向器转动的下一个瞬间，电刷-连接到铜线圈-离开 FIRING 段并移动到 BLANK 段（或“死点”位置）。这个新位置打断了来自电池的“水压效果”（输入电压），因此引起铜线圈导体里的原子无序。这样的原子无序导致磁场区域的崩溃，表现为陀螺子（组成磁场）返回原始发出它们的原子。当这发生时，一些组成崩溃磁场的陀螺子与导体原子的陀螺子直角碰撞。这种直角碰撞和原来磁场扩展时的直角碰撞方向相反。作为第二次碰撞的结果，额外的电流（以运动陀螺子形式）在导体中产生。这种电流与来自电池的原始“催化”输入电流运动方向相同。

At the next instant in the rotation of the commutator, the brushes that are connected to the copper coil leave the BLANK SEGMENT and enter the SHORTOUT SEGMENT. This SHORTOUT SEGMENT permits the current (gyroscopic particles) produced by the collapsing magnetic field to complete the copper-coil conductor circuit, but prevents additional current input from the battery. Such electrical-circuit-completion within the copper-coil conductor works to maintain the magnetic field of the coil since the current (gyroscopic particles) circulation in the copper-coil conductor is in the same direction as the original, "catalytic" input current from the battery source. Such "magnetic-field maintenance" results in a continual force which acts in the proper direction to affect the rotating magnet adjacent to the copper-coil conductor, although the magnet and conductor are not limited to this position or configuration. Furthermore, such a continual force greatly reduces wasted energy (electrical sparking) at each current break in the commutator!

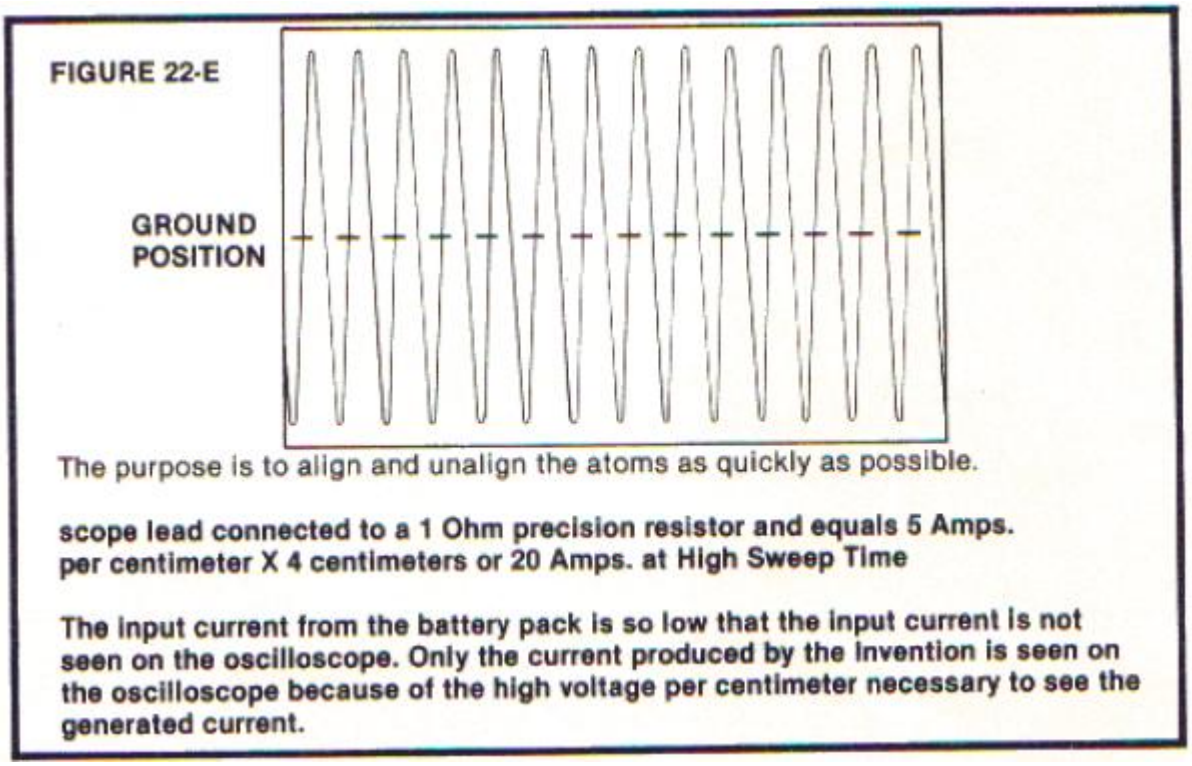
换向器转动的下一个瞬间，电刷连接到铜线圈，离开 BLANK 段，进入 SHORTOUT 段。SHORTOUT 段允许由磁场崩溃产生的电流（陀螺子）完成电路循环，但阻止外部电流从电池输入。铜线圈中的这种电流循环是为了保持线圈磁场，因为铜线圈导体中电流（陀螺子）流动和来自电池的原始“催化”输入电流有相同方向。这种“磁场保持”导致一个连续力，它在恰当的方向上影响磁体旋转到邻近铜线圈导体，虽然磁体和导体不限于这个位置或布置。此外，这种连续的力大大减少了能量的浪费（电火花），这发生在换向器断开电流时。

Following the SHORTOUT SEGMENT position, the brushes connected to the copper coil enter the FIRING SEGMENT position again, and the entire process is repeated twenty times per revolution of the rotating magnet since the commutator is attached to the shaft of the rotating magnet.

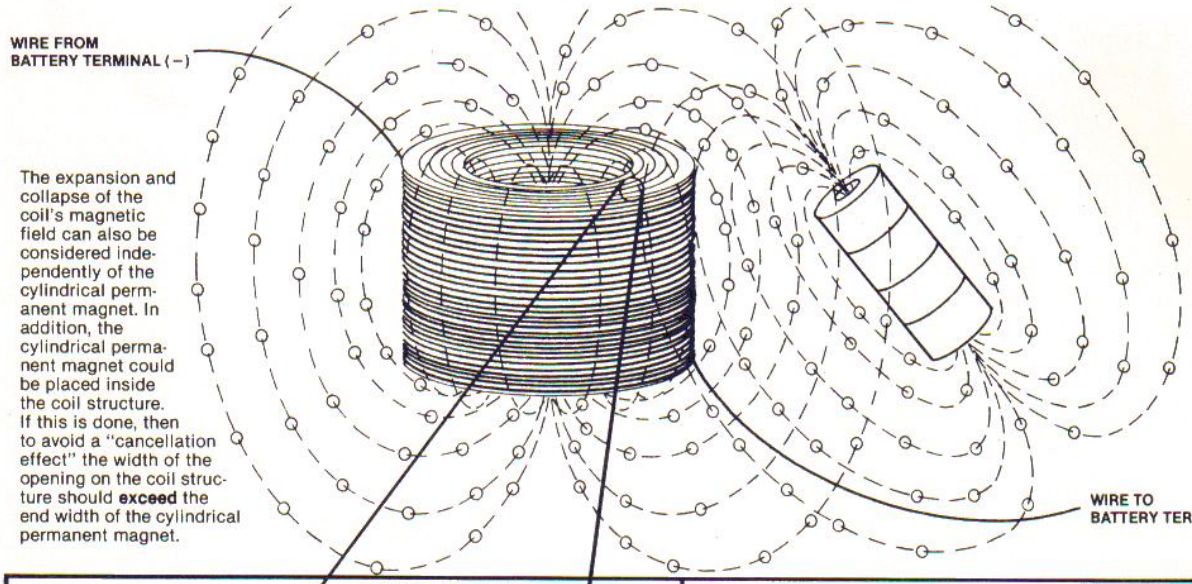
SHORTOUT 段之后，电刷连接到铜线圈再次进入 FIRING 段，整个过程在磁体旋转的每一圈会重复 20 次，因为换向器贴在磁体旋转的轴上。

D. The electrical activity as described in section 22-D appears on an oscilloscope as depicted in the drawing below. (See Figure 22-E.)

D.在 22-D 部分描述的活动电流在示波器显示如下。(看图 22-E)

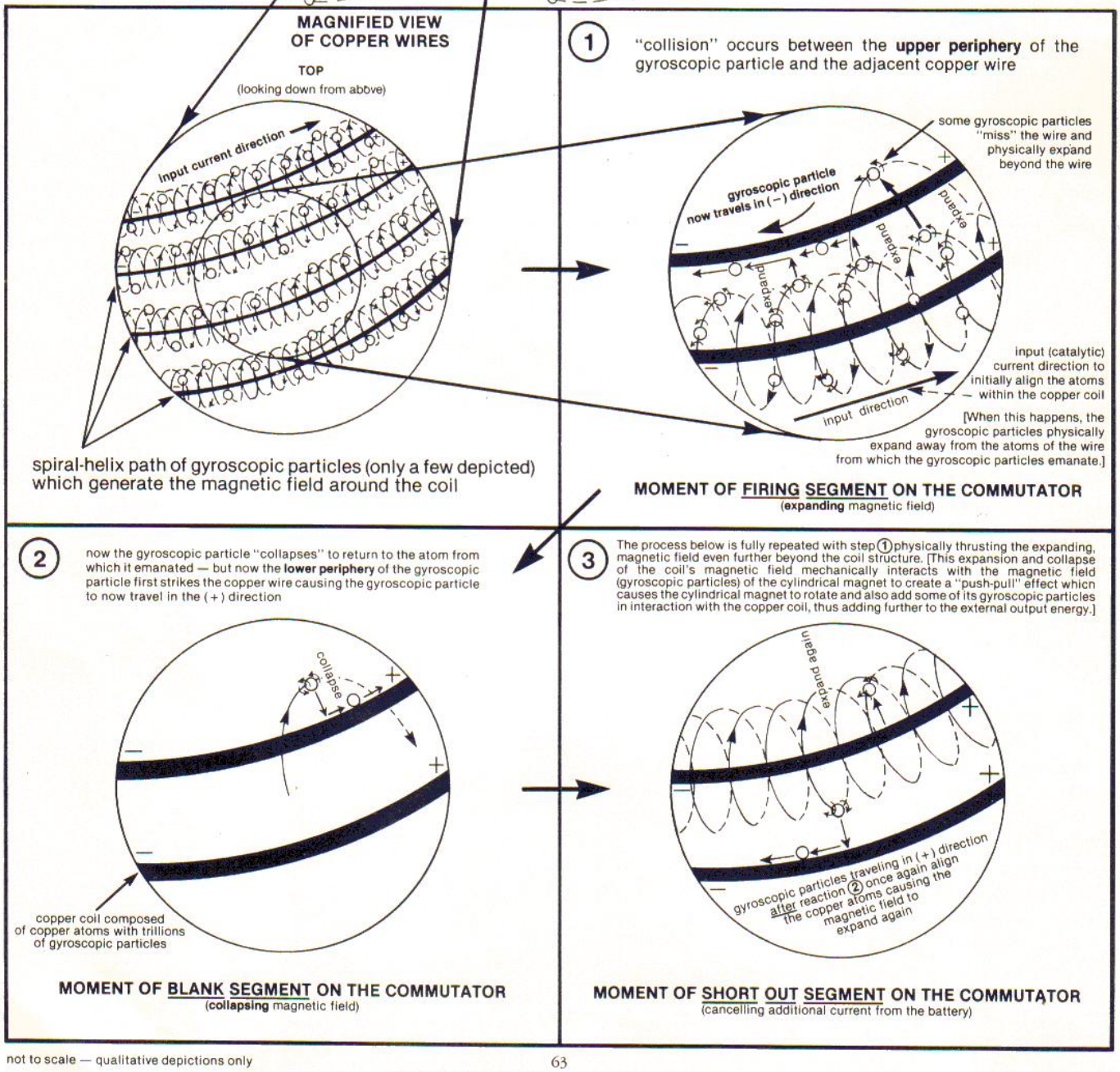


INTERACTION OF COIL STRUCTURE AND ROTATING, CYLINDRICAL, PERMANENT MAGNET



The expansion and collapse of the coil's magnetic field can also be considered independently of the cylindrical permanent magnet. In addition, the cylindrical permanent magnet could be placed inside the coil structure. If this is done, then to avoid a "cancellation effect" the width of the opening on the coil structure should **exceed** the end width of the cylindrical permanent magnet.

FIGURE 22-D



not to scale — qualitative depictions only

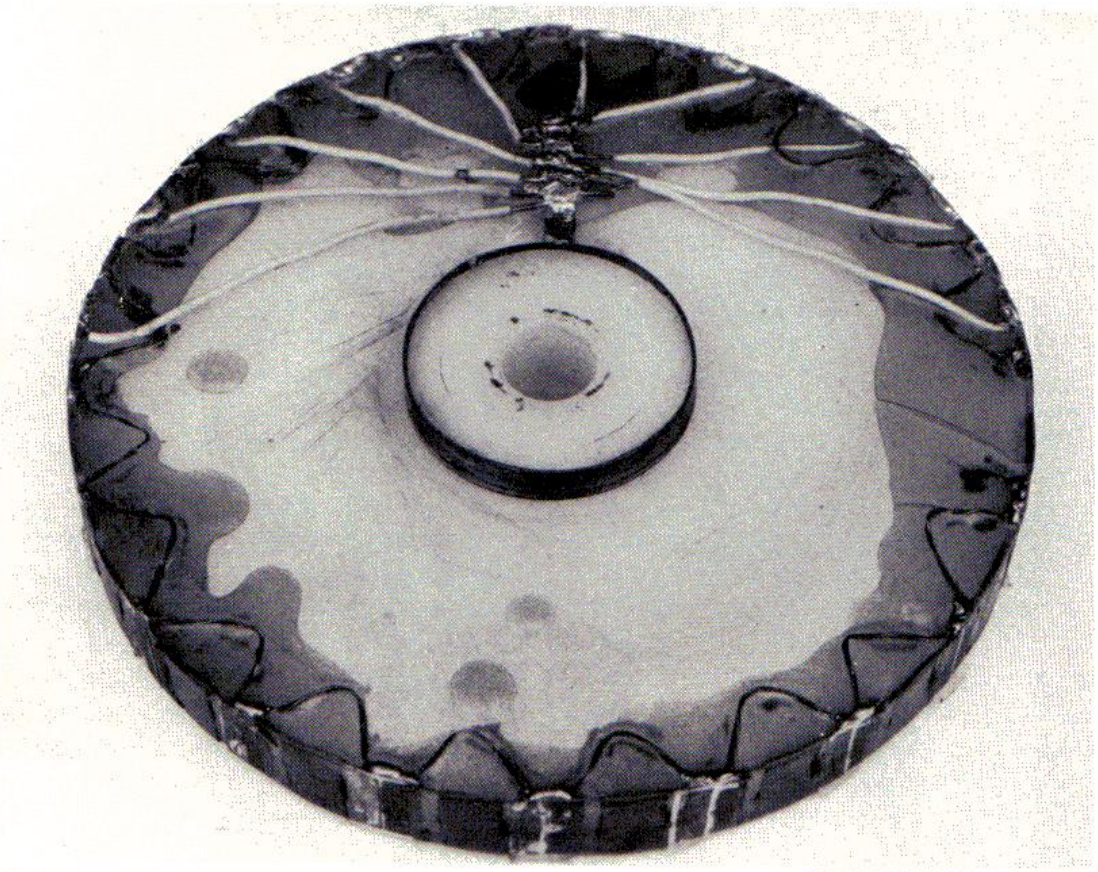


PHOTO BY MATT ANDERSON

PHOTOGRAPHS OF COMMUTATORS

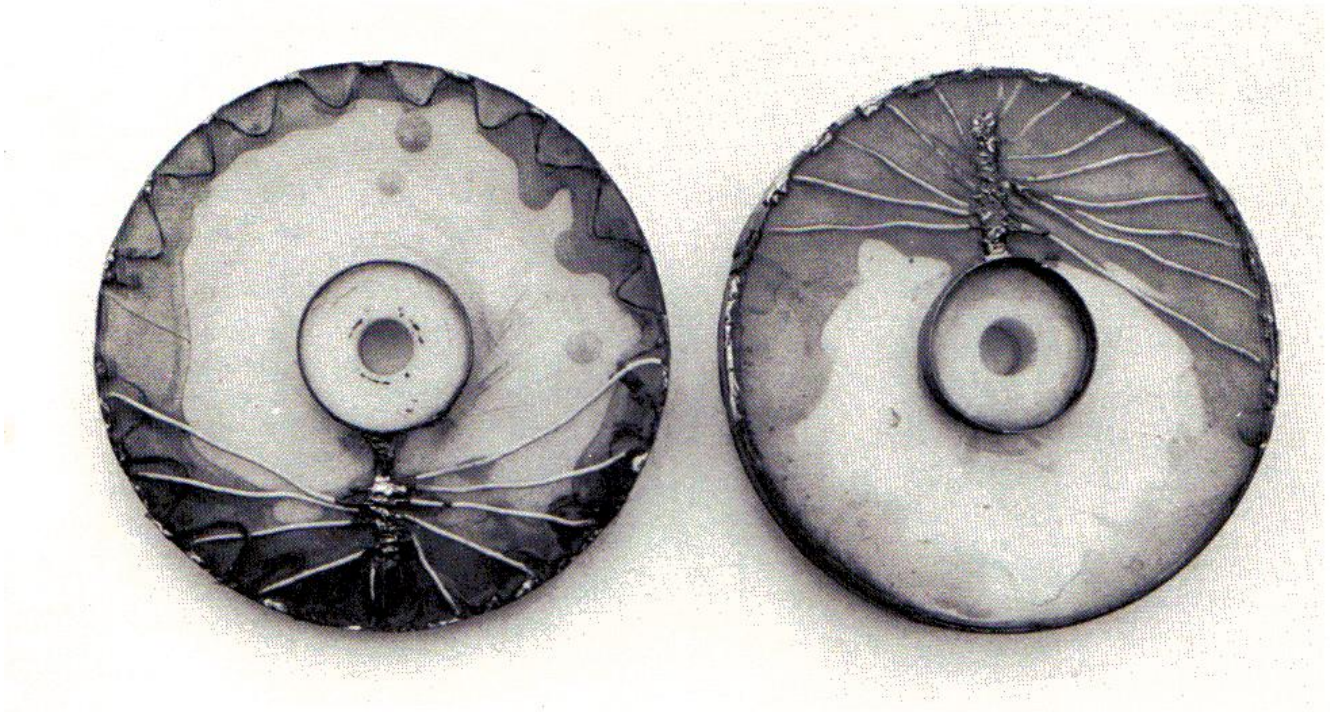


PHOTO BY MATT ANDERSON

The power produced from the conducting coil within the system becomes significantly greater than the initial "catalytic" power coming from the acorns of the materials comprising the external battery.

“来自系统导体线圈的能量变得比来外部电池材料原子的初始‘催化’能量更多。”

Observe that we have not created Power or Energy from nothing. The system I have innovated releases Power or Energy from the sub-atomic (gyroscopic particle) arrangement of the atoms comprising all materials (coil, battery and magnet) in accordance with Einstein 's equation of E = MC2. This process occurs on a 100% conversion-efficient basis.

看，我们没有从虚无创建功和能量。我发明的系统是从组成所有材料（线圈，电池，磁体）原子的粒子（陀螺子）排列释放功和能量的，遵守 E = MC2 等式。这个过程转化效率为 100%。

D. One must pay strict attention to the exacting Fact of the mechanical essence described by the above results. As the commutator revolves, the mechanical action which occurs within the atoms of the conductor coil should remind one of the timing sequence that occurs during the spark plug firing within an automobile engine. Just as the proper timing of such firing with in the vehicle engine cannot be ignored or taken for granted, neither can the gyroscopic particles (comprising and emanating from the atoms of the system's materials) be ignored or taken for granted in terms of their "firing" to generate the production of external energy output. When the sparking in piston firing is stopped, in the case of an automobile engine, this is analogous to properly timing the rotating commutator to stop the firing of Production as the coil brushes physically enter the BLANK SEGMENT position.

D.必须注意上面结果中严谨的实事的力学本质。随着换向器旋转，导体线圈内原子中发生的力学运动遵守发生在汽车发动机电打火时的时序。正如车辆发动机恰当的打火时间不能被忽视或假定，同样不能忽视或假定陀螺子（从系统材料原子发出）通过“打火”产生额外的能量输出。当活塞停止打火时，就汽车发动机来说，这类似于在恰当的时间旋转的换向器停止生产条火，线圈电刷物理上进入 BLANK 段位置。

Anyone familiar with the conventional engine within an automobile knows that, if all pistons were ‘‘fired” simultaneously and continuously, there would be no rotational motion of the crankshaft. Under such circumstances, one would have only an "Unobvious Work, Force, or Power" produced in such an engine. The same effect is true (by what I have presented in the above discussion) when the atoms within the copper-coil conductor remain aligned at all times.

任何熟悉传统发动机的人都知道，如果活塞被同时并连续 “打火”，机轴将没有旋转运动。这种情况下，在这样的机器里将只产生“不可见功、力或功率”。同样的效果也会发生（我已经在上面的讨论中表达过），当铜线圈中的原子一直保持排序状态。

Under such circumstances, there would be no rotational motion on the part of the commutator (via the revolving magnet), nor would additional, external, electrical current (gyroscopic particles) be produced once the magnetic field of the copper-coil conductor ceased to expand and collapse. In essence, there would be only an "Unobvious Work, Force, or Power” produced.

在这种情况下，换向器将没有旋转运动（通过旋转磁体），一旦铜线圈的磁场停止扩展，也没有额外的电流（陀螺子）产生。本质上，只有“不可见功、力或功率”产生。

In order to understand what I have written and to be able to physically construct those units capable of achieving what I have achieved, you must "Master" these teachings. The "timing effect" l have described is very critical. This "timing effect" will vary from the configuration of one physical system to another. EXAMPLE: The voltage (hydraulic effect) input, and the intensity of any interacting, additional magnetic field(s) will all be critical considerations to the "timing effect" of any system’s design.

为了明白我写了什么和能构建我已经构建的装置，你必须“精通”这些知识。“我描述的‘时间效应’是非常严格的。”通过更改系统配制可以改变“时间效应”。例如：电压（水压效应）、任何交互的强度、额外的磁场对任何系统的“时间效应”的设计是要严格考虑的。

“The ‘timing effect’ I have described is very critical.”

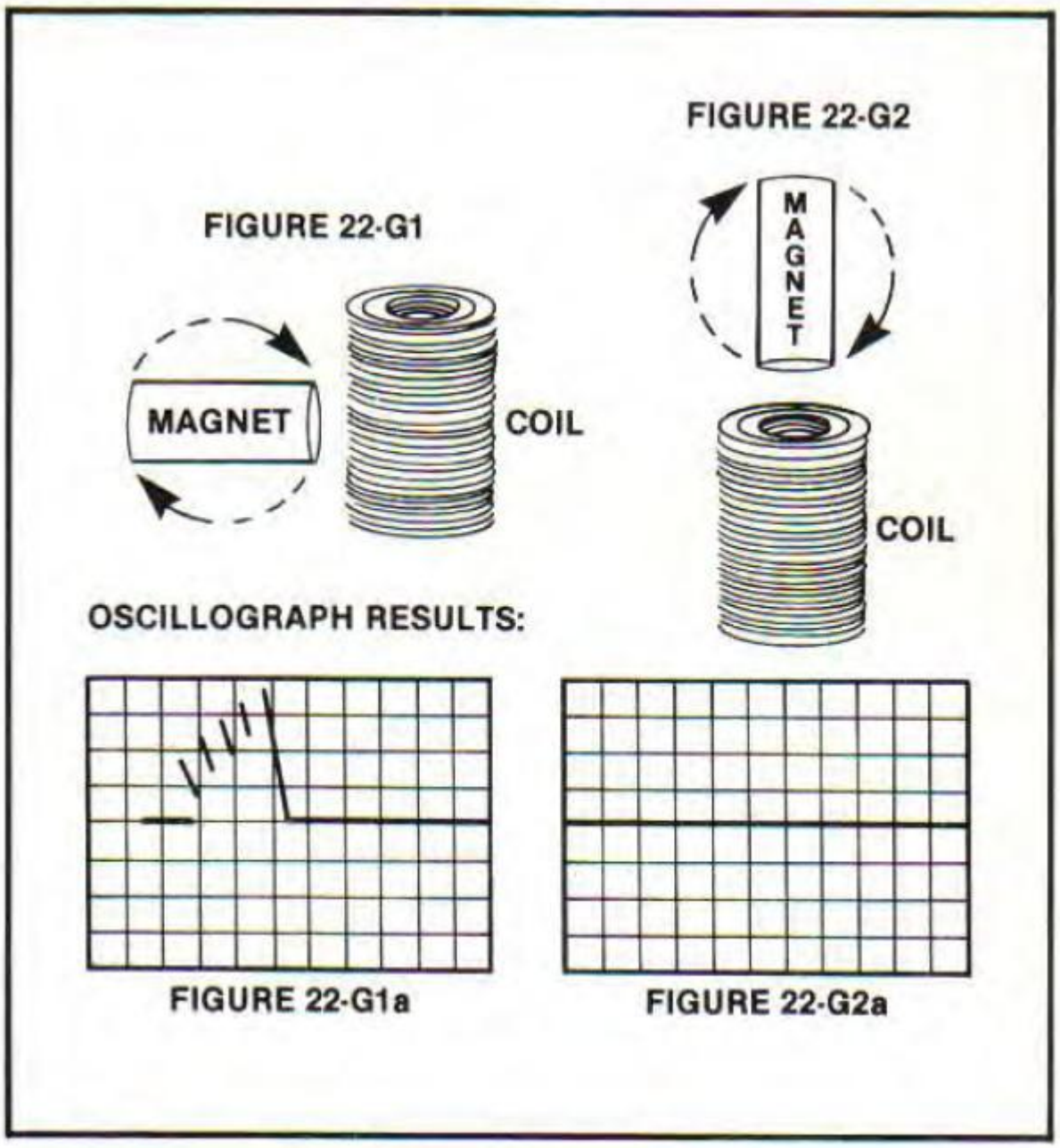
“我描述的‘时间效应’是非常严格的。”

To properly understand what I have written, you must "Master" the fact that we are mechanically discussing the "Mechanical essence" of E = MC2.

为了正确的明白我所写的，你必须“精通”我们已经讨论的 E = MC2“力学本质”的事实。

G. Return to Dr. Hasting's Affidavit of June 17, 1984 and study the oscillograph pictured on page 37. This oscillograph was produced via the utilization of a 14 lb. magnet adjacent to a copper coil (see Figure 22-G1). The current spike in Figure 22-G1 was produced from the copper coil.

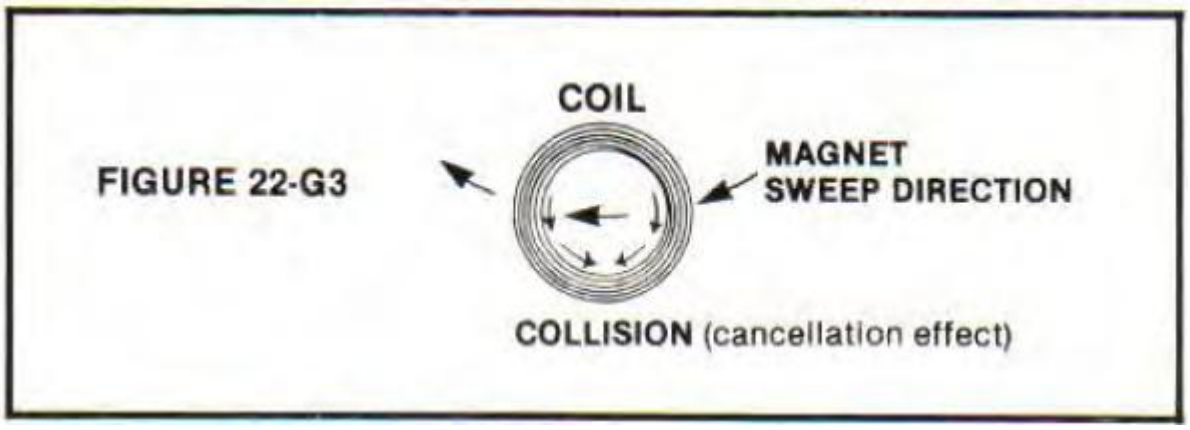
回到 1984 年 6 月 17 日 Dr. Hasting 的宣誓书，学习 37 页示波形图的照片。这张波形图是利用 14 磅的磁体接近铜线圈时产生的（看图 22-G1）。图 22-G1 的电流峰是由铜线圈产生的。



However, if the 14 lb. magnet was physically placed above the copper coil (as in Figure 22-G2), then no current spike (see Figure 22-G2a) was produced from the coil. In the second position of the magnet in Figure 22-G2, there was a "cancellation effect." The copper coil had only a 4-inch interior diameter and the cylindrical 14 lb. magnet had a 4-inch outside diameter. By placing the magnet above the coil (as in Figure 22-G2), the magnet's magnetic field would sweep across both sides of the copper coil in the same direction as the magnet itself rotated. (See Figure 22-G3.)

然而，如果 14 磅的磁体只是放在铜线圈上方（如图 22-G2），线圈就不会产生电流峰（看图 22-G2）。在图 22-G2 中磁体的第二个位置，有一种“抵消效应”。铜线圈只有 4 英寸内径，圆柱形的 14 磅磁体有 4 英寸外径。通过旋转磁

体到线圈上方（如图 22-G2），磁体磁场区域将以相同方向扫过铜线圈两侧，如磁体自己旋转。（看图 22-G3）



Consequently, some of the gyroscopic particles comprising the magnetic field of the rotating magnet would collide with some of the gyroscopic particles comprising the atoms of the coil at a right angle and generally cause a "cancellation effect" of the repetitive, mechanical motions of the gyroscopic particles within the magnetic field in conjunction with the gyroscopic particles within the copper coil. This "cancellation effect" would vary with the speed of the rotating magnet.

因此，组成旋转磁体磁场区域的陀螺子将与组成线圈原子的陀螺子以直角碰撞，产生 “抵消效应”，这是由磁场区域和铜线圈里的陀螺子重复的力学运动造成的。

H. To you, the reader, I cannot overemphasize the fact that even the slightest alteration in the configuration of a particular system’s design can effect a noticeable change in the observed results. You cannot take anything for granted!

H.对于你，读者，我不能过分强调，即使对一个特定系统设计配制最轻微的改变也能产生显而易见的结果的改变。你不能有任何轻信。

"... even the slightest alteration in the configuration of a particular system’s design can effect a noticeable change in the observed results."

“即使对一个特定系统设计配制最轻微的改变也能产生显而易见的结果的改变。”

I. I will now describe a factual observation which should "open your mind" even further. I will refer to the commutator design already discussed and depicted above in Figures 22-C1 and 22-C2.

I.我将描述一个真实的观察，将理深入“解放你的思想”。我将参考图 22-C1 和 22-C2 已经讨论描述的换向器设计。

The above-described commutator was affixed to the shaft of a rotating, 100 lb., solid magnet (6-inch diameter and 12-inch length). [The 400 lb. magnet depicted in Figure 15-C1 on page 21 was part of my largest prototype.] The 100 lb. magnet was placed in the center of a very large coil composed of 4,200 lbs. of copper atoms (5-gauge copper coil). In addition, 300 lbs. of copper atoms (24-gauge copper coil) was wrapped around the larger, 4,200 lb. copper coil. The purpose of this configuration was to prove that most of the gyroscopic particles comprising the magnetic field emanating from the aligned atoms of the permanent, 100 lb. magnet would avoid collision with the gyroscopic particles comprising the atoms within the conducting coils. (See Figure 22-I which is conceptually related to Figure 22-E above.)

上面讨论的换向器贴在一个 10 磅可旋转的固体磁体上（6 英寸直径，12 英寸长）。[图 15-C1 描述的 100 磅磁体是最大原型的一部分。]100 磅的磁体被放在一个非常大的由 4200 磅铜原子组成的线圈（5-gauge 线的铜线圈）的中间。另外，300 磅铜原子（24-gauge 线铜线圈）包裹在 4200 磅铜线圈外。这个配制的目的是证明 100 磅永磁体排列原子发出的组成磁场区域的陀螺子大多将避免和组成导体线圈的陀螺子碰撞。（看图 22-I，在概念上和上面图 22-E 关联。）

In addition, because of the spatial placement of the coil and magnet, most of the gyroscopic particles comprising the magnetic field generated by the conductor coil would also avoid collision with the gyroscopic particles remaining within the atoms comprising the 100 lb. magnet. However, the gyroscopic particles comprising the magnetic fields of both the 100 lb. rotating magnet and the 4,200 lb. coil would react with one another as desired and designed by me.

另外，因为线圈和磁体间的空间，由导体线圈产生的组成磁场区域的陀螺子大多将避免和组成 100 磅磁体原子里的陀螺子碰撞。然而，100 磅旋转磁体和 4200 磅线圈的磁场区域将按我希望和设计的彼此交互。

J. The results of a test utilizing the configuration of Figure 22-I are described as follows:

J.利用图 22-I 的配制产生的结果讨论如下：

Two (2) 40-watt fluorescent bulbs were connected in series as a resistance load to 300 lbs. (atoms) of a 24-gauge copper coil. A battery voltage (consisting of 66 volts of "hydraulic pressure" equating 31 milliamps or 2.04 watts) was then input into the motor coil consisting of 4,200 lbs. (atoms) of 5-gauge copper coil. When the 100 lb. magnet rotated at 48 RPM, the two bulbs were emitting useful light, but were not continuously lit since they flickered at a rate consistent with each "break" in the current.

两个 40 瓦的荧光管作为电阻串连到 300 磅（原子）24-gauge 的铜线圈。一个电池电压（66 伏“水压”相当于 32 毫安或 2.04 瓦）输入到由 4200 磅（原子）5-gauge 铜线组成的电动线圈。当 100 磅的磁体以 48 转每分钟旋转时，两个灯管发出亮光，但不是持续发光，因为它们以电流“断开”的速率闪烁。

Now to state the shocking fact to those only skilled in the old teachings:

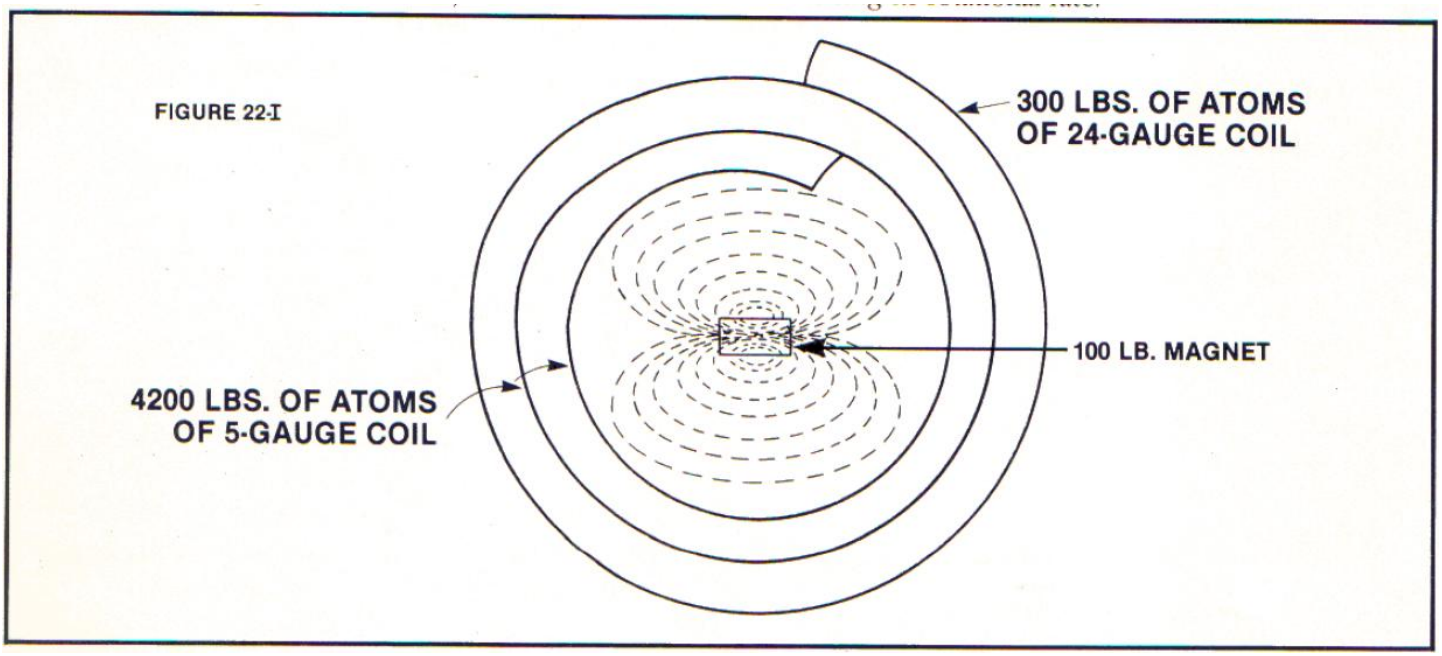
现在说明这令人震惊的被传统教学封杀的事实：

If the resistance load of the two (2) 40-watt fluorescent bulbs connected in series was disconnected (open circuit) from the generator coil consisting of 300 lbs. of atoms -and this was the only deliberate change made -then the 100 lb. rotating magnet would reduce its rotational rate within two minutes to 36 RPM. At the same time, average "catalytic" current input from the battery increased to 2.57 watts (equivalent to 39 milliamps X 66 volts input into the 4,200 lbs. (atoms) of 5-gauge, motor-coil conductor).

如果两个串连的 40 瓦的荧光灯管电阻与由 300 磅原子组成的发电线圈断开连接-这是唯一的人为更改-之后 100 磅旋转磁体将减速到 2 分钟 36 转。同时，电流发出的平均“催化”电流输入增加到 2.57 瓦（等于 39 毫安乘 66 输入到 5-gauge 线圈导体的 4200 磅（原子））。

In essence, you will note that by reducing the load on the generator coil of 300 lbs. (of copper atoms), then the motor coil of 4,200 lbs. (of copper atoms) drew more power and resulted in the 100 lb. magnet reducing its rotational rate.

本质上，你应该注意到通过减少 300 磅（铜原子）发电线圈的负载，之后 4200 磅（铜原子）的电动线圈抽取了更多功并导致 100 磅磁体减慢了它的旋转速度。



In effect, the RPM of the rotating magnet decreased by 25% and the power demand increased by 25% when the load was removed from the generator!

实际上，当负载从出电机移除后，旋转磁体每分钟转数减少 25%，功率损耗增加了 25%。

QUESTION: How can this result occur?

问题：这种结果是怎么产生的?

ANSWER: Simple, if you have Mastered my teachings. [It should be noted that I theoretically predicted such results in my original Patent Application long before I constructed the above-described prototypes.] I stated in my original Patent Application: as they aligned and unaligned, the atoms (within the generator coil of my prototype) could indeed have a "beneficial effect" upon the atoms of the motor coil in terms of the desired results. This "beneficial effect" would occur due to an "action/reaction effect" and vice versa.

回答：如果你已经精通我所教授的，这是很简单的。[应该注意到，我的理论已经预测到了在我原始专利应用中的这种结果，这是在我构建上述原型很久以前。]我在我的原始专利应用里说：当原子（我原型发电机线圈中）排序和失序时能产生一种“有益的影响”作用于电动线圈的原子上，产生希望的结果。这种“有益的影响”将归因于“作用/反作用效果”，反之亦然。

Such an "action/reaction effect" is what occurred in the above-described test results. The proper timing of this "action/reaction effect" is essential to obtain the desired results.

这种“作用/反作用效果”是在上述描述实验结果中发生的。恰当的“作用/反作用效果”时序是获得希望结果的关键。

EXPLANATION: When the load of the two (2) fluorescent light bulbs was connected into the circuit of the 300 lbs. (atoms) of the generator coil, then the atoms of the conductor coil would align and unalign properly. However, when the circuit was broken by removing the load (light bulbs) and leaving the circuit open, the atoms of the conductor coil could not properly align and unalign.

解释：当两个荧光灯管负载连接到 300 磅（原子）发电机线圈电路时，导体线圈的原子将恰当的排列失序。然而，当移除负载（灯管）让电路短路，导体线圈的原子将不能正确的排列和失序。

The proper timing relative to the segmented commutator (described in Figure 22-C1 and 22-C2) is very critical. For example: If the segmented commutator was simply flipped over 180° -enabling the coil- connected brushes to first make physical contact with the SHORTOUT SEGMENT, then the BLANK SEGMENT, then the FIRING SEGMENT (see Figure 22-J1) -the results would be that the light output of the two (2) fluorescent bulbs would be greatly reduced.

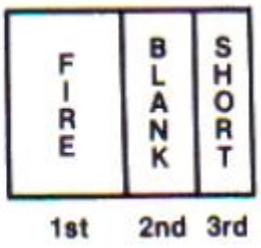
分段换向器（在图 22-C1 和 22-C2 中描述）的恰当时间是非常严格的。例如：如果分段换向器只是简单的翻转 180°-使线圈连接到电刷，第一次连接到 SHORTOUT 段，之后 BLANK 段，之后 FIRING 段（看图 22-J1）-结果是两个荧光灯管的的亮度将大幅下降。

FIGURE 22-J1

Such a reduced light output should be clear proof that nothing in this system I have described should be taken for granted! Why the resultant difference in light output? It should be obvious. In Figure 22-J1, the "timing sequence" first SHORTS OUT the motor coil via the SHORTOUT SEGMENT (creating a "current- break effect "), followed by a BLANK SEGMENT (nothing happens), and then the unit "fires" via the FIRING SEGMENT to align the atoms in the motor coil.

这种亮度下降清楚证明在我描述的系统中不要轻易假设任何东西。为什么会有亮度的不同？这是明显的。在图 22-J1 中，“时间序列”通过 SHORTOUT 段（创建“电流断开效应”）首先短路电机线圈，随后是 BLANK 段（什么也没发生），最后通过 FIRING 段给装置“打火”来排列电机线圈中的原子。

FIGURE 22-J2



In the earlier test described above (in Section 22-C and pictured again in Figure 22-J2), the atoms of the motor coil are "fired" via the FIRING SEGMENT (releasing energy), followed by the BLANK SEGMENT (allowing the atoms to unalign [via the collapsing magnetic field] in the opposite direction to the energy of an expanding magnetic field), followed by the SHORTOUT SEGMENT (permitting the energy in the system to attempt to maintain atom alignment until the next FIRING SEGMENT). This sequence permits the energy of the system to apply a sustained force to keep the magnet rotating.

在上面描述的更早的实验中（在 22-C 部分并截图在图 22-J2 中），电机线圈原子通过 FIRING 段（释放能量）被“打火”，随后是 BLANK 段（允许原子在和扩展磁场能量相反的方向失序[通过摧毁磁场区域]），随后是 SHORTOUT 段（允许系统中的能量保持原子排序直到下一个 FIRING 段）。这个顺序允许系统能量施加一个持续的力保持磁体旋转。

One should clearly see that there is an extreme difference in the energy-output-effects generated by different mechanical configuration s. I must again stress the importance of the "timing" factor!

应该清楚的看到，不同的力学配制产生的能量输出效果是极不同的。我必须再次强调“时序”因素的重要性。

Actually, the reader should recognize that there are many different ways to design a system to replace the commutator circuitry described above. With additional research, one could select magnetic, electronic, or light-sensitive circuitry - to mention only a few.

实际上，读者应该认识到，有许多不同的方法来设计系统替换上面描述的换向器电路。额外的，可以选择磁性、电子或光敏电路-只提到一点点。

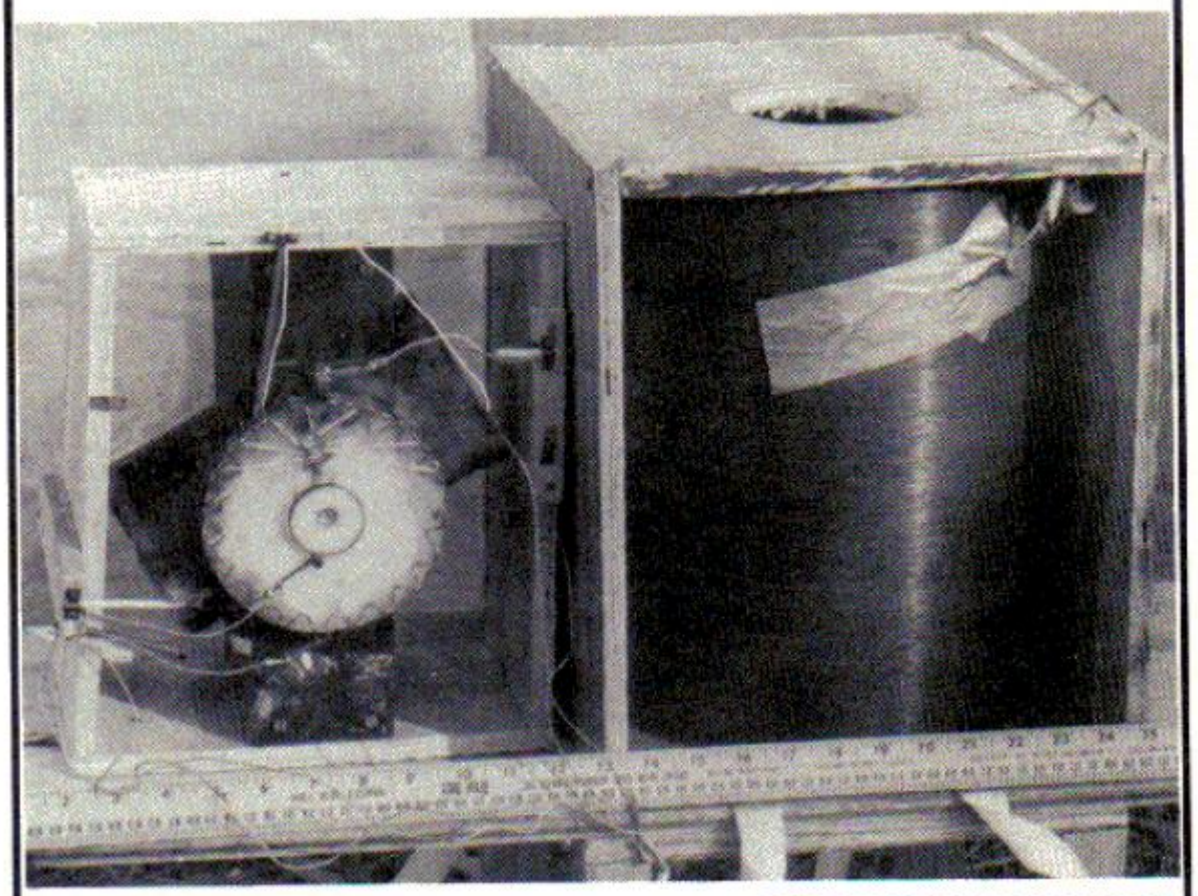
"One should clearly see that there is an extreme difference to the energy-output-effects generated by different mechanical configurations."

“应该清楚的看到，不同的力学配制产生的能量输出效果是极不同的。”

K. Let us now examine the effects of a similarly-designed, segmented commutator placed upon the shaft of a 14 lb. magnet adjacent to approximately 140 lbs. of 30-gauge (copper) conductor coil. (See Figure 22-K1.) [I must stress that my system is not limited to the use of copper as the conducting medium! There are other materials which -under certain circumstances -would permit more efficient atom alignment, e.g., super cooled niobium tin. Atom unalignment (as it occurs in copper) will also have to occur within the system.]

让我们来看一个相似设计的效果，分段换向器放在 14 磅磁体的轴上，邻近 140 磅 30-gauge（铜）导体线圈。（看图 22-K1）[必须强调我的系统不限制只用铜作为导电介质！有许多其它材料-在特定环境-将允许更有效的原子排列，如，过冷的铌锡。原子失序（如铜中发生的）也必须在系统发生。]

FIGURE 22-K1

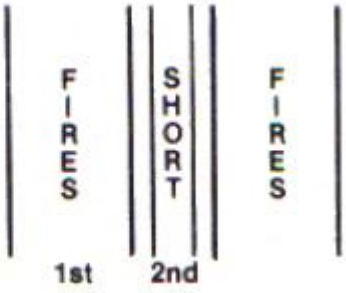


—PHOTO BY MATT ANDERSON

In prototype 22-K1 the FIRING SEGMENT on the commutator switch is 3/8" wide, the SHORTOUT SEGMENT is 1/8" wide, and the GAP between the FIRING and SHORTOUT SEGMENTS is 1/16" wide. In the configuration of this commutator, the position of the BLANK SEGMENT is combined with that of the SHORTOUT SEGMENT. This is accomplished by simply placing Scotch tape over the SHORTOUT SEGMENT. (See Figure 22-K2.)

在 22-K1 原型中，换向开关的 FIRING 段为 3/8"宽，SHORTOUT 段 1/8"宽，FIRING 段和 SHORTOUT 段中间的缺口 1/16"宽。以这种换向器的配制，BLANK 的位置是和 SHORTOUT 段在一起的。这可以通过简单的将透明胶盖在 SHORTOUT 段上。

FIGURE 22-K2



In Figure 22-K2, each SHORTOUT SEGMENT is covered with a thin layer of regular Scotch "magic" tape. As the commutator revolves, such a tape covering has the following effect: first the coil brushes connect with the FIRING SEGMENT and atoms within the motor coil align to produce energy; then the coil brushes pass over the SHORTOUT SEGMENT covered with tape which causes the atoms to unalign and produce energy in the same direction (per the discussion in Section 22-D). This energy traveling in the same direction causes a small spark to flash across the GAP between the FIRJNG SEGMENT and the SHORTOUT SEGMENT. In addition, there is a 76-watt, 8-foot, fluorescent bulb and three (3), 1/4-watt fluorescent bulbs

connected in series, but hooked parallel to the motor coil which in turn is connected to the rotating commutator. There are a total of twenty-eight (28) sequences consisting of FIRING SEGMENT-GAP-SHORTOUT SEGMENT-GAP-FIRING SEGMENT per rotation of the commutator.

在图 22-K2 中，每个 SHORTOUT 段被一薄层规则透明胶带覆盖。当换向器旋转时，这种覆盖的胶带的如下影响：首先线圈电刷连接到 FIRING 段并且电机线圈中的原子排列产生能量；之后线圈电刷到覆盖胶带的 SHORTOUT 段，引起原子失序产生同向的能量（22-D 部分讨论过）。同向运动的能量引起一个小火花掠过 FIRING 段和 SHORTOUT 段中间的缺口。另外，串连一个 76 瓦 8 英尺的荧光灯管和 3 个 1/4 瓦的荧光灯管，但和电机线圈平行依次连接到旋转的换向器。换向器每一圈共有 28 组 FIRING 段-缺口- SHORTOUT 段-缺口- FIRING 段序列组成。

Utilizing 960 volts (hydraulic pressure) input (from transistor batteries) into 140 lbs. (atoms) of 30-gauge, copper-coil conductor with 50,000 ohms of resistance, one has only 1.6 milliamps or 1.5 watts going into the system. As a result, the 14 lb., cylindrical magnet mechanically rotates at 105 RPM and all four fluorescent bulbs emit useful light, but not to full brightness due to a steady flickering. [Such lights flicker during each sequence of the revolving commutator. If the commutator were to turn faster, the flickering would become less and less noticeable and the brilliance of the lights would increase. With a sufficient rotational rate on the part of the commutator, the lights would achieve full brilliance and would seem to emit light at a steady rate since the flickering rate would occur faster than the human eye could detect.)

利用 960 伏（水压）输入（来自电池组）到 140 磅（原子）30-gauge 电阻 50000 欧的铜线圈导体，只有 1.6 毫安或 1.5 瓦输入到系统。结果是，14 磅的圆柱磁体以 105 转每分钟的速度旋转并且 4 个日光灯管可灯光，但因为连续闪烁导致亮度不足。[这样的灯光闪烁发生在换向器的每个时序。如果换向器转动够快，闪烁将被得不可察，灯光也会更亮。换向器以足够的旋转速率，灯光将足够亮并似乎持续发光，因为闪烁速率已经快到人眼不可察。]

QUESTION: Can you predict what would occur if the coil in Figure 22-K1 was subjected to a cryogenic temperature?

问题：你是否能预测如果降低图 22-K1 线圈的温度将发生什么？

ANSWER: The 50,000 ohm resistance in the coil would greatly decrease and the same voltage (hydraulic pressure) employed above would cause a greater number of atoms to align in the 30-gauge coil. This would result in an increased energy release (via a magnetic field created by gyroscopic particles). Atom unalignment will have to occur in this system as it does in copper at normal room temperature.

回答：线圈 50000 欧的电阻将大大减小，同样的上面使用的电压（水压）将引起 30-gauge 线圈更多数量的原子排列。这将导致更多能量的释放（通过陀螺子创建磁场区域）。系统中和室温一样铜中的原子将失序。

K. The most efficient system design is one in which the smallest amount of external current input will cause the greatest amount of atom alignment and unalignment within the system. [This approach is contrary to and more efficient (over 100% production efficiency) than all electrical systems designed before this time!] As necessary, one can then have the means to unalign the atoms and also reduce the FIR1NG time.

最有效的系统设计是用最小的外部输入电流引起系统最多的原子排列失序。[这种方法和传统电力系统设计是相反的，而且更有效率（）]

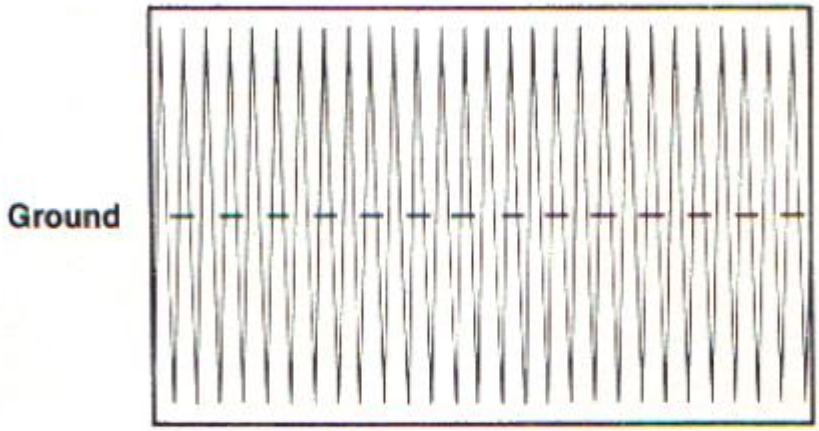
"The most efficient system design is one in which the smallest amount of external current input will cause the greatest amount of atoms alignment and unalignment within the system."

"最有效的系统设计是用最小的外部輸入电流引起系统最多的原子排列失序。"

EXAMPLE: Even at room temperature, the power output of a 30-gauge motor coil is noticeably greater than the external power input from a battery source. On an oscilloscope such power appears as described in Figure 22-L1:

示例：即使室温下，30-gauge 电机线圈输出的能量也明显的大于电池源额外输入的能量。在示波器中这种能量如图 22-L1：

FIGURE 22-L1



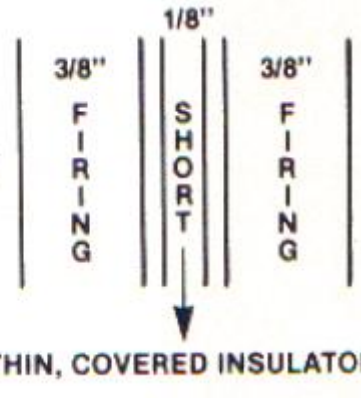
Scope leads connected to a 1 Ohm resistor.
Current = 2 Amp. per centimeter X 4 or
8 Amps. and Sweep Time in milliseconds

FIRES = 28 times per revolution
BREAK = 28 times per revolution
SHORT = 28 times per revolution

Imagine a "friction-free" commutator (designed according to Figure 22-C above) which has a 5-foot diameter with FIRING, GAP, and SHORTOUT SEGMENTS built to the same dimensions as those in Figure 22-M1:

想像一个“无摩擦”换向器（根据上面图 22-C 设计）有 5 英尺直径，FIRING、 缺口、SHORTOUT 段尺寸按图 22-M1 建造。

FIGURE 22-M1



With such a commutator configuration, the FIRING, GAP, SHORTOUT sequence would occur over 360 times per revolution. Under such conditions, atom alignment/unalignment of the conductor occurs at a faster and faster rate, thereby producing greater and greater energy for the given “catalytic " energy input from an external source. Combine such action with the lower resistance within 140 lbs. (atoms) of a 30-gauge coil as discussed in Section L, and the results should be obvious: the energy output with increase! As stated earlier, there are many physical variations that become "obvious" once my teachings are Mastered and not Memorized.

用这样的换向器配制，FIRING、 缺口、SHORTOUT 序列每转将发生 360 次。这种环境下，导体原子排序/失序以更快的速率发生，因此给定的“催化”电流输入会产生更多能量。结合这种运动和 L 部分讨论的低电阻 140 磅（原

子）30-gauge 的线圈，结果是明显的：输出的能量增多了！正如更早的声明，一但精通而不是死记我所教授的，有许多物理变化会变得“显而易见”。

EXAMPLE OF ANOTHER DESIGN: The commutators described above could simply consist of a FIRING SEGMENT and a GAP but not a SHORTOUT SEGMENT.

作者设计的例子：上面描述的换向器可以只有 FIRING 段和缺口，而没有 SHORTOUT 段。

However, such an arrangement will create sparking (wasted energy) if it is not properly designed. Such a proper design could consist of a bulb or resistance load placed across or parallel to the motor coil (connected to the commutator) that has a greater resistance than the motor coil itself. This would cause the external-power, “catalytic" input voltage (via the hydraulic effect) to push the current into the motor coil, but not push current noticeably through the bulb or resistance load. The electromotive force produced by the gyroscopic particles of the atoms within the conductor coil (as such atoms unalign to collapse the magnetic field) -which occurs as the coil-connected brush passes over the GAP -would then travel through the bulb or resistance load because such resistance is less than that required to ionize the air at the GAP. [It should also be understood that the mechanically-designed commutator can be replaced by other switch technologies which are more efficient.]

然而，如果不恰当的设计，这样的安排会创造电火花（浪费能量）。这样的恰当设计可以通过添加一个电阻大于电动线圈的灯泡或电阻穿过或平行电动线圈（连接到换向器）达到。这可以引起额外的功率，“催化”输入电压（通过水压效应）将电流推到电动线圈中，但明显的推电流到灯泡或电阻负载中。电动势力由导体线圈里的原子（这样的原子失序产生磁场截获的崩溃）中的陀螺子产生-这发生在线圈连接的电刷滑过缺口时-之后穿过灯光或电阻负载，因为这样的电阻小于电离缺口间空气的电阻。[应该明白，这种力学设计换向器能被其它更有效的开关科技代替。]

23. I shall now discuss the FIRING or "timing" sequences in conjunction with the battery design, and the results that will be observed from such sequences. [Review Sections 16-H1 and 16-H2.]

23.我将讨论打火或时序和电池交互的设计，结果对于这种时序是显而易见的。[回顾 16-H1 和 16-H2 部分]

Since the "action/reaction effect" described in Section 22-J occurs too quickly, the standard amp and volt meters will not be able to monitor the results quickly enough for proper observation. Therefore, it is necessary to use an oscilloscope that can be calibrated to an extremely fast "sweep-time" measured in millionths of a second.

因为 22-J 部分讨论的“交互效应”发和的太快，标准的电流和电压表不能足够快的显示结果用业观察。因此，用示波器测量极快的百万分之一秒内的“扫描期”是必要的。

A. The facts obtained by a thorough study of my energy machine prove that the most efficient battery design is one which functions both as a capacitor as well as a batter y.

A.通过对我的能源机深入学习得到的实事证明有效的电池设计同时有电容和电池的功能。

When current is released from a conventional capacitor, the voltage (hydraulic pressure) will quickly be reduced. I have already shown that in order to achieve the proper functioning of my energy machine, it is necessary to input a "catalytic" voltage (hydraulic pressure) which can be maintained as high as possible (and preferably at a constant rate) to achieve maximum atom alignment within the conductor coil.

当电流从传统电容释放，电压（水压）将很快下降。我已经说明为了得到我能源机的合适效果，一个尽可能高的（有恒定速率）的输入“催化”电压（水压）是必须的，这使导体线圈中的原子最多的排列。

B. In my experience, I have observed that the dry cell battery already possesses certain mechanical characteristics which (accidently) demonstrate several of the requirements necessary to have a capacitor as well as a battery. Such characteristics are even noticeable when I utilized the segmented commutator design (described above) and obtained high spikes of current produced by the atoms within the motor -coil conductor. Such current traveled in the same direction as the "catalytic" input current from the battery. (See Figure 23-B as seen on an oscilloscope. This is not drawn to scale.)

B. 以我的经验，我已经观察到干电池已经有一写的力学特性，（偶然）证明几种需要必须有电容也可以一个电池。当我利用分段换向器设计（上面讨论过）获得由电动线圈内原子产生的电流高峰时，这种特性是非常明显的。这种电流和来自电池的“催化”输入电流同向流动。（当作示波器看图 23-B。这没有按比例画。）

FIGURE 23-B

In Figure 23-B, the "catalytic" input current from the battery is so low that when set on the "volts- percent" position, the oscilloscope shows no input current from the battery (___). However, the current produced from the conducting coil appears on the oscilloscope as high spikes (_/_) of current which travels in the same direction as the small, "catalytic " input current, then the spikes (_/ _) will travel off the screen (if the input current _/ _is shown).

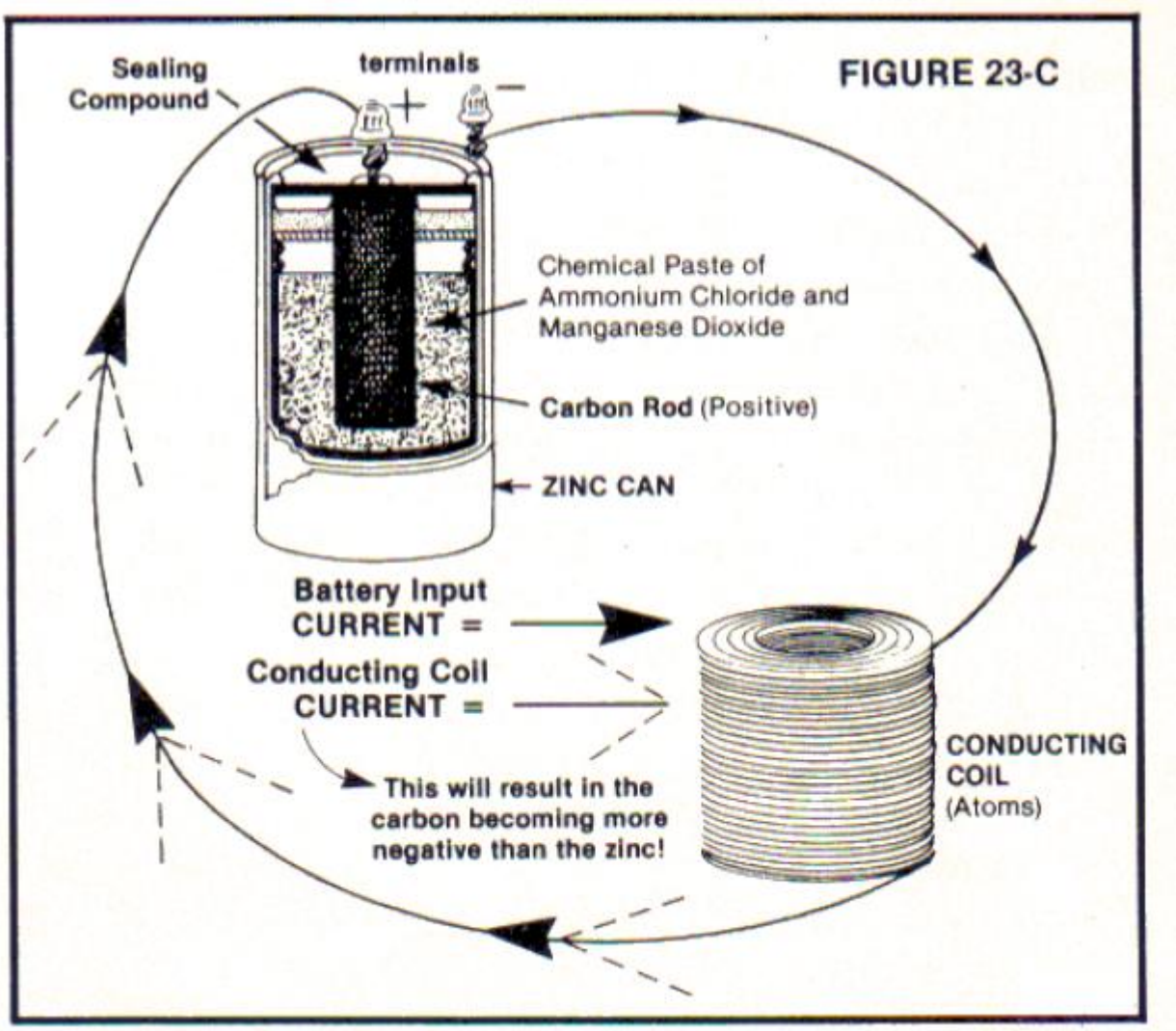
在图 23-B 中，来自电池的“催化”输入电流小到当换到“伏特百分档”示波器显示没有电流来自电池(___)。然而，导体线圈产生的电流在示波器上显示电流高峰(_/_)，运动方向和微小的“催化”输入电流相同，之后峰值(_/ _)会在屏幕上消失（如果输入电流_/ _显示出来）。

C. Without careful consideration, you, the reader, could assume that the high spikes of current from the conducting coil would quickly destroy the dry cell battery. The facts that I have observed in my experiments prove that such is not the case. The following mechanical examination of a dry cell battery combined with what I teach will explain why such battery destruction does not occur.

如果不注意，你，读者，将假定来自导体线圈电流高峰将摧毁干电池。事实是我观察到在我的实验里证明这是不会发生的。下面的关于我教授的干电池知识的力学问卷将解释为什么这种电池不会被摧毁。

Examine the following drawing of a dry cell battery in Figure 23-C:

检查下面图 23-C 中的干电池单元的：



D. Study carefully what "mechanically" occurs when the current (gyroscopic particles) initially flows from the zinc (atoms) into the conductor coil and returns to the carbon rod within the battery. It should be obvious that energy has been removed from the zinc and has traveled to the carbon rod. [This action then invokes Faraday's Law of Electrolysis.] The metallic zinc delivers zinc ions to the electrolyte; if this process continues, the zinc would deteriorate until the cell would become useless.

D.细心学习当电流从锌皮（原子）进入到导体线圈并返回电池碳棒时发生了什么“力学”现象。很明显，能量已经从锌移到碳棒。[这种运动证明法拉第电解定律。]金属锌变成锌离子到电解液；如果这种过程持续下去，锌将一直减少到电池单元不能放电。

E. However, as the electrical process continues, study what "mechanically" occurs when current (gyroscopic particles) is released from the atoms of the conducting coil and flows into the carbon rod. One should easily see that there is an extreme "mechanical " distinction (from that which occurs via Faraday's law of Electrolysis), because the zinc releases no energy and the carbon rod has actually gained energy (gyroscopic particles).

E.然而，随着电解过程，学习当电流（陀螺子）从导体线圈释放并流入炭棒时发生了什么力学行为。你应该很容易的看到这有极大的“力学”区别（与通过法拉第电解定律产生结果相比），因为锌没有释放能量而炭棒得到了能量（陀螺子）。

D. QUESTION: Why the difference in results obtained in Section 23-D compared to those of Section 23-E?

D. 问题：为什么 23-D 部分和 23-E 部分得到的结果不同?

ANSWER: In Section 23-D, the zinc atoms contained an excess of gyroscopic particles which would readily flow to the carbon rod. However, in Section 23-E, the "mechanical" conditions have altered and the carbon rod now receives an excess of gyroscopic particles which mechanically cause the carbon to become more negative than the zinc. As this process occurs, a very sensitively-calibrated oscilloscope will depict the zinc as "positive" and the carbon rod as "negative." With such polarization, the "mechanical action" (described in Section 23-D) will attempt to invoke Faraday's Law of Electrolysis and reverse this new process. At this point, the gyroscopic particles will flow from the carbon rod (acting as a capacitor) into the zinc which causes zinc Ions to be removed from the electrolyte and return to the zinc itself.

回答：在 23-D 部分，锌原子包含多余的陀螺子，它们有流向炭棒的趋势。然而，在 23-E 部分，“力学”环境已经改变，炭棒已经接收到过多陀螺子,使炭棒变得比锌更不活泼。当这过程发生时，一个标准灵敏的示波器可以显示锌做“正极”炭棒做“负极”。这样的极化，“力学运动”（23-D 部分描述）将试图遵守法拉第电解定律反转新进程。这样看来，陀螺子将从炭棒（行为像一个电容）返回到锌，这导致锌原子从电解液返回锌金属本身。

"I have been discussing the utilization of the atoms within a battery and the utilization of the atoms within a conducting coil on a 100%, conversion-efficient process in accordance with $E = MC^2$."

“我已经讨论了利用电池内原子和导体内原子 遵守 $E = MC^2$ 按 100%转换率转换为能量的过程。”

This effect is probably most efficient when the current continues to reverse back and forth rapidly.

如果电流快速连续往返，这种效果可能理有效率。

Under such conditions, the zinc Ions (which are initially delivered to the electrolyte) would not have a sufficient opportunity to solidly bind themselves with the electrolyte and would therefore be more easily "torn loose" to return to the zinc. Such action results in the voltage (hydraulic pressure) of the zinc rising higher than its initial voltage. My prototypes and dry cell batteries have demonstrated these described results although such results were not obtained at the highest efficiency of operation. [I encourage the reader to study, "Master," and improve upon my results!]

在这种环境下，锌原子（开始进入到电解液）将没有一个机会和电解液形成一个整体，因此交更容易“撕裂”返回到锌。这种行为导致锌的电压（水压）比开始上长得更高。我的原型机和干电池单元已经证明这种描述结果，虽然这种结果没有使运行更高效。[我鼓励读者在我的结果基础上学习、“精通”、改进。]

Actually, too much output energy (gyroscopic particles) can destroy the desired results. Consequently, the amount of material (atoms) within the battery is directly proportional to the quantity of energy it can accommodate. [Other materials can

be used for better results.]

实际上，太多的输出能量（陀螺子）能摧毁期望的结果。因为，电池内的材料（原子）数量直接决定了它能容纳的能量。[别的材料可以有更好的结果。]

G. As depicted on an oscilloscope calibrated in millionths of a second, the voltage of a battery pack connected in series will show the following: [Note: A variety of voltages can be used. In my smallest prototype, I have used between 300 and 950 volts.]

正如以百万分之一秒标准示波器显示的，串连电池组电压显示如下：[注意：用的电压可能变化。在我的最小的原型里，我用的电压在 300 到 950 伏。]

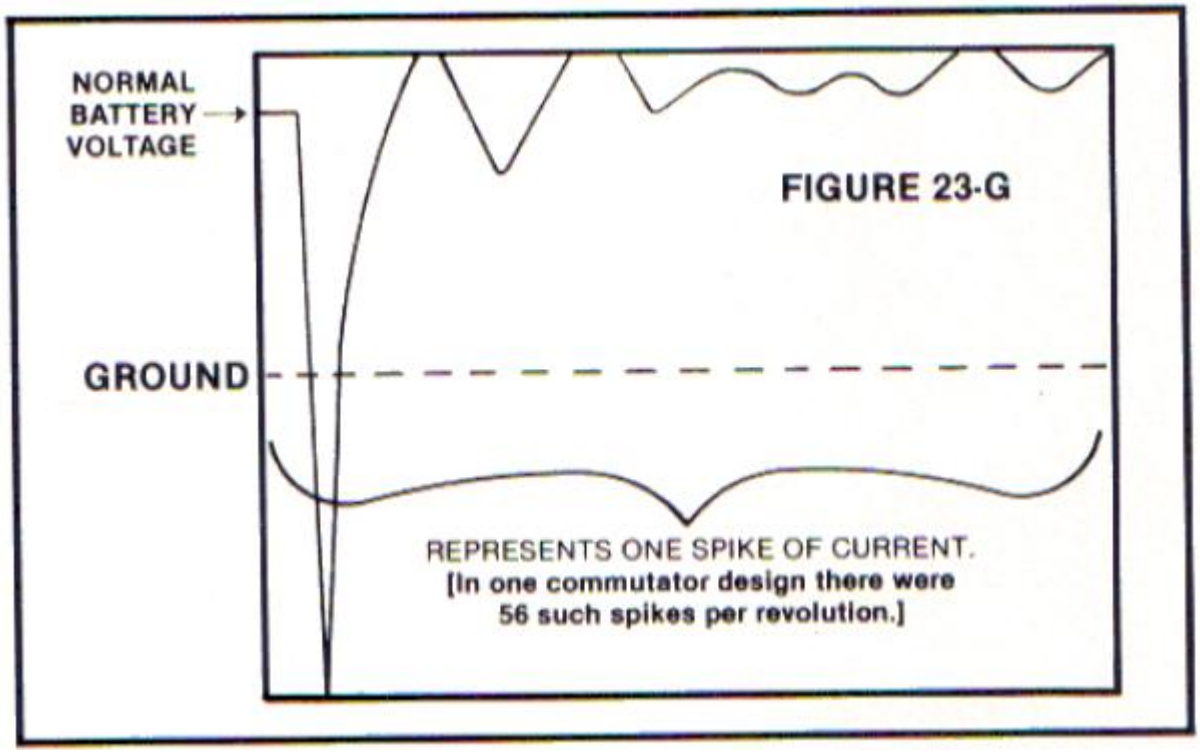


FIGURE 23-G

When current (gyroscopic particles) "shoots" from the conducting coil (atoms) into the carbon rod, the battery voltage will "shoot" sharply negative and then increase to an amount past the normal battery voltage. This indicates a charging effect upon the zinc within the battery followed by the "action/reaction effect" of additional discharges and charging action within the battery pack.

当电流（陀螺子）从导体线圈“射”到炭棒，电池电压将猛然下降，之后回长升到过去正常电流电压。这指明电池中锌上有一个充电效应，这在电池组的额外放电“交互效应”和充电行为之后。

24. In essence, I have been discussing the utilization of the atoms within a battery and the utilization of the atoms within a conduction coil on a 100%, conversion- efficient process in accordance with E = MC2. The same is true with the use of a permanent magnet.

24.本质上，我已经讨论了利用电池内原子和导体内原子 遵守 E = MC2 按 100%转换率转换为能量的过程。在对永磁体的利用里也是同样的。

QUESTION: Have you "mastered" what I have taught you? [I must continue to ask you this question to ensure that you are simply not "memorizing" or "blindly accepting" what I am presenting in this Book.] What l have discovered is basically "simple." But remember, it is "simple" after-the-fact of its presentation!

问题：你已经“精通”我已经教授的了吗？[我必须继续问你这个问题，保证你不是简单“记住”或“盲目接受”我在书中表达的。]我的发现基本是很“简单”。但记住，这种“简单”是在以事实的介绍之后的。

The perfection of production units for my Pioneering Invention must advance at a rapid pace with the support of every caring scientist, business individual, statesman, and human being upon this Earth. This energy machine will have a most

beneficial effect upon all of us. The economic impact of this revolutionary invention upon the Earth will be discussed in Chapter 23.

我的先进发明的产品装置一定会以非常快的速度完善，由每一个地球上关心的科学家、商业个人、政治家、人类支持。能源机将对所有人有最大的益处。这项地球上的发明在经济上的影响将在第 23 章讨论。

第 10 章 量子力学

Chapter 10 QUANTUM MECHANICS

"We hope that the present fluctuations of thinking are only Indication of an upheaval of old beliefs which in the end will lead to something better than the mess of formulas which today surrounds our subject."

- Erwin Schrodinger

注：大意是说希望有新的思想结果现在混乱的公式体系。

25. Up to this point, I have been discussing the mechanical utilization of the basic building entity of all matter: the "gyroscopic-action-entity." I will now conceptually relate the behavior of this "gyroscopic-action- entity" to QUANTUM MECHANICS.

25. 基于这一点，我已经讨论了构成物质的基本单元实体的力学利用:“陀螺仪效应实体”。我现在将在概念上将这种“陀螺仪效应实体”的行为和量子力学联系起来。

[NOTE: I will now be discussing other important concepts concerning the nature of the gyroscopic particle. I must add that there are those who may feel that I should have published these other concepts in a separate book rather than combine their exposition with a presentation describing the nature of my energy machine. I disagree with anyone who may feel this way. The universal nature of the gyroscopic particles (more generally referred to as "gyroscopic-action- entities") which I have discovered is of far greater significance than one, simple application of their utilization, i.e., my energy machine. By combining these two intellectual areas, I wish to stimulate the mind of the reader to think beyond the limitations of thought imposed by the study of one technical application. I would prefer that the reader give more careful consideration to understanding a universal principle: the principle inherent in the nature and action of the gyroscopic particle!]

[注意：我现在将讨论另外关于陀螺子理论的重要概念。我必须添加这些内容，有些人觉得我应该在不同的书里发布这些概念，而不是和其它讨论能源机的阐述放在一起。我一点都不同意这种观点。已经发现的陀螺子（更多指“陀螺仪效应的实体”）的普遍理论远比一种它的一种应用，即我的能源机，要重要的多。通过结合这两块知识，我希望激发读者思想超越学习技术应用的限制。我更喜欢读者更关注于理解一种普遍的法则：陀螺子固有的理论和行为！]

A. I will quote several passages from a well-written book entitled The Nature of Physics by Peter J. Brancazio of Brooklyn College, City University of New York [published by MacMillan Publishing Company, Inc., New York, 1975). From page 585:

A.我将引用几段文字，来自于…:

WAVE-PARTICLE DUALITY

波料二相性

"The discovery that material particles exhibit wave characteristics adds a new dimension to the problem of wave-particle duality. The classical descriptions of light as a wave and matter as composed of solid particles no longer seem valid -for both matter and light have been found to display wave and particle characteristics. How can we provide a coherent explanation for these extremely puzzling discoveries? One way to resolve the problem of wave-particle duality is to assume that one or the other is more fundamental. There are two possible alternatives:

材料粒子有波特性的发现给波粒二相性问题增加了新的维度。经典的光是一种波、物质由实体粒子组成的描述好像不再有效-因为发现物质和光都有波和粒子特性。我们如何给这极让人困惑的发现一个明确的解释？一种解决波粒二

相性问题的方法是假定波或粒子是更基础的。这有两种可能的选择：

"(1) light and matter are ultimately composed of particles. Their wave properties derive from the group behavior of a large number of interacting particles. [This approach, it will be recalled, was unsuccessfully adopted by Einstein in an attempt to explain the behavior of light.]

（1）光或物质最终是由粒子组成。它们波的特性来自于大量相互作用的粒子的集体行为。[在爱因斯坦尝试解释光的行为时，这种方法没被他认可。]

"(2) Light and matter are ultimately composed of waves. The particle properties are then derivative. One could hypothesize that 'particles' are really concentrations of waves or perhaps stable condensations in an underlying fluid or field.

（2）光和物质最终由波组成。粒子特性之后被派生。可以假定“粒子”实际是由波或更基础的稳定液体或区域浓缩而成。

"Unfortunately, neither of these alternative hypotheses has been developed with any great success. Most modern-day physicists generally believe that neither particles nor waves are more fundamental, but rather that they are two manifestations of some as-yet-unidentified (and possibly unidentifiable) entity.

不幸的是，两种假定都没有取得巨大成功。大多数当代科学家相信粒子或波都不是更基础的，而不是它们由一些未知的（也许无法辩认）实体表示。

注：意思是人们没想用一种更基础的粒子表示波料二相性，而是认定其一为另一个的基础。

"If the beginning student has trouble understanding how an entity can possess both wave and particle attributes at the same time, he or she may be comforted to learn that most experienced physicists are just as disturbed by this problem.”

如果开始学习的学生在理解一个实体怎么同时有波和粒子特性时，他或她也许安慰你大多有经验的科学家也被这个问题困扰。

Quoting from The Nature of Physics, page 604:

引自 The Nature of Physics，604 页：

"Einstein firmly believed that underlying the quantum theory -perhaps on a sub quantum level -there had to be fully deterministic laws. In a letter to Max Born written in 1926, Einstein summarized his position:

爱因斯坦坚定的相信在量子力学表面下-也许在一个次量子能级-有一个完全确定性的法则。在 1926 年给 Max Born 的信中，爱因斯坦总结到：

'Quantum mechanics is very impressive. But an inner voice tells me that it is not the real thing. The theory has much to offer ... but I am convinced that God does not throw dice. '

量子力学是非常深刻的。但一个内在的声音告诉我它不是真的。这种理论有太多先择，但我相信上帝不会掷色子。

"At the present time, nearly fifty years after the birth of quantum mechanics, the argument has not been settled. There is no evidence whatsoever that a deterministic sub quantum level exists. Nor is there any convincing evidence to support the orthodox interpretation. For example, no experiments have ever been performed on a single atom or electron to test the orthodox contention that the wave function describes the properties of a single particle rather than a group of particles. Although the orthodox interpretation is generally accepted, there remain a few who, like Einstein, believe that the mathematical formalism of quantum mechanics is not the final answer. This attitude has been most eloquently described by Erwin Schrodinger:

现在，量子力学诞生了大约 50 年，争论一直没停。没有任何证据说明一具确定性的次量子级存在。也没有任何令人信服的证据支持正统的解释。例如，没实验用一个原子或电子测试波函数描述的一个粒子而不是一群粒子的特性传统论点。虽然传统解释被普遍接受，仍然有少数人，如爱因斯坦，相信量子力学的数学形式体系不是最终答案。这种看法已经被 Erwin Schrodinger 充分说明：

'Many maintain that no objective picture of reality is possible. However, the optimists among us (of whom I consider

myself one) look upon this view as a philosophical extravagance born of despair. We hope that the present fluctuations of thinking are only indications of an upheaval of old beliefs which in the end will lead to something better than the mess of formulas which today surrounds our subject. '"

许多人依然坚持没有一种真实客观的构想是可能的。然而，我们之中的乐观者（我认为我自己是其中之一）看待这种观点为一种哲学上绝望的放纵。我希望当前思想的动摇只是表明一种旧思想的突变，最后领导我们得到比今天话题中混乱公式更好的结果。

B. My work pays tribute to those thinking individuals such as Einstein, Schrodinger, Faraday, Maxwell, Newton, and others. The sensitive and inquisitive mind will see that my work more accurately brings together the work of these impressive contributors for the advancement of the human species. The effect of such intellectual "bringing together" is to generate a new "oneness" which is more impressive and beneficial than the work of any single, great innovator alone.

B. 我有工作证明了这些人的想法，如爱因斯坦、薛定谔、法拉第、麦克斯韦、牛顿和其他人。敏感好奇的人将看到我的工作准确的将这些给人类带来进步的伟人的工作结合在一起。这种智慧的“结合”效应会产生一种新的“单一理论”，它比每一个改革者的工作都更深刻有益。

Let me begin by pointing out that the mathematical consequences of the Dirac equation stipulates that the energy terms applied to a fourth quantum number having two values, (+ 1/2) and (- 1/2), are identical to the spin-quantum-number M_s which assigns to the electron an intrinsic spin and states that magnetism is a result of electron spin within the material. On the other hand, it has still been taught that a magnetic field contains no kinetic energy -only potential energy -and that the "lines of force" surrounding a magnet are imaginary. [This erroneous concept has been taught in spite of the brilliant insights of Faraday and Maxwell!]

让我从指出一些事实开始，狄拉克方程数学结果规定能量级施加到**第四量子数（？）**有两个值，(+ 1/2) 和 (- 1/2), 和自旋量子数 M_s 一致，确定电子内自旋并声明磁性是电子自旋带动内部物质的结果。另一方面，依然被告知磁场不包含机械能-只有潜在能量-并且磁体周围的“力线”是想像的。[这个错误的观念已经被教授，尽管法拉第和麦克斯韦已经洞悉。]

注：1928 年英国物理学家狄拉克（Paul Adrien MauriceDirac）提出了一个电子运动的相对论性量子力学方程，即狄拉克方程。利用这个方程研究氢原子能级分布时，考虑有自旋角动量的电子作高速运动时的相对论性效应，给出了氢原子能级的精细结构，与实验符合得很好。从这个方程还可自动导出电子的自旋量子数应为 1/2，以及电子自旋磁矩与自旋角动量之比的朗德 g 因子为轨道角动量情形时朗德 g 因子的 2 倍。电子的这些性质都是过去从分析实验结果中总结出来的，并没有理论的来源和解释。狄拉克方程却自动地导出这些重要基本性质，是理论上的重大进展。

You will discover in this Book that the essence of Magnetism, Electricity, Gravity, Inertia, Planetary Motion, Thermodynamics, and a New Source of Energy and Matter are all mechanically explained by the nature of a "gyroscopic-action-type-particle." It was long after I had developed my concepts that I discovered my "mechanical” explanation correlated precisely with Dime's concept of mathematical spin. The reader should find it easy to advance from quantum mechanics to the mechanical essence of all matter consisting of the gyroscopic-action-entity which I present in this Book.

你将在本书中发现，磁力、电力、重力、惯性、行星运动、热力学、能量和物质的新来源都可以通过‘陀螺仪效应粒子’的理论力学解释。在我发展我的概念很久以后，我发现我的“力学”解释精确的符合 Dime 的数学旋转的概念。读者应该发现，它比量子力学更容易得到我呈现在本书中由陀螺仪效应实体组成的所有物质的力学本质。

"... the essence of Magnetism, Electricity, Gravity, Inertia, Planetary Motion, Thermodynamics, and a New Source of Energy and Matter are all mechanically explained by the nature of a 'gyroscopic, action-type particle.'"

“…磁力、电力、重力、惯性、行星运动、热力学、能量和物质的新来源都可以通过’陀螺仪效应粒子’的理论力学解释.”

A gyroscopic action is the "mechanical” essence of a "spin. " I will now present many (seemingly unrelated) scientific facts which I examined years ago for the purpose of testing the truth of my Hypothesis and ascertaining if my Hypothesis could explain other scientific observations for which there was no "mechanical" understanding.

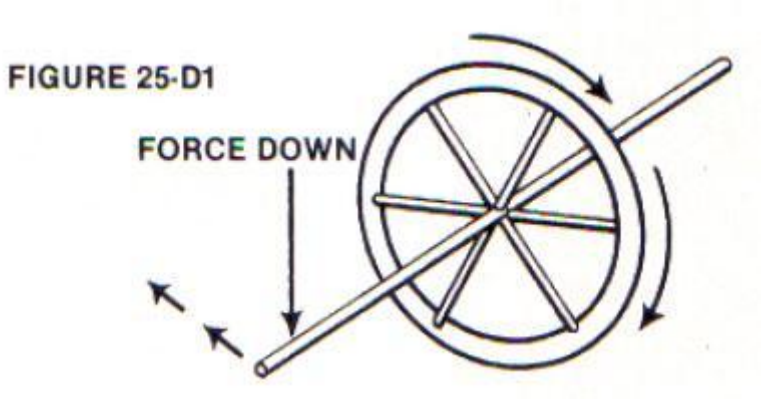
陀螺仪效应是“旋转”的力学本质。我将展示许多（看似无关）的科学事实，这是我多年前为检测我的假说真实性的收集的，确认是否我的假说可以解释其它不能用“力学”理解的科学发现。

D. If we do not have a unified, "mechanical” understanding of the essence of all matter, then what we physically "see" as an outsider to matter can be very deceiving.

D. 如果我们没有一个关于物质本质统一的“力学”理解，那么我们作为一个物质外的旁观者“看”到的是非常有欺骗性的。

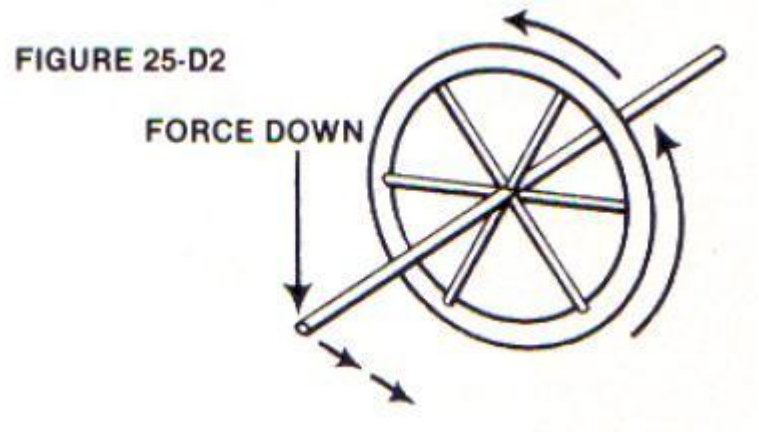
EXAMPLE:(See Figure 25-D1.)

例如：（看图 25-D1）



Have an uneducated individual view a gyroscope spinning in a clockwise direction as it faces the individual. Have that individual push down on the axis of the gyroscope. Because the individual observes that the gyroscope pivots to the left (with respect to the individual), the individual may arbitrarily call such pivotal motion "negative.”

一个无知的人看到一个陀螺仪面向他顺时针旋转。他向下按陀螺仪的一端。因为他看到陀螺仪轴向左运动（相对于他），他也许会武断的称这样的轴向运动为“负极”。



While the same individual closes his eyes, reverse the spin of the gyroscope in such a way that it now spins (see Figure 25-D2) in a counter -clockwise direction as it faces the same individual. Have the individual open his eyes and push down on the axis of the "same" gyroscope. Because the individual then observes that the gyroscope pivots to the right, the individual may arbitrarily call such pivotal motion "positive.” Such subjective descriptions would appear to indicate that there are two different gyroscopes. However, you and I know that this is not the case. Actually, what the individual believed to be two different gyroscopes is, in fact, one and the same: a single gyroscope simply having its mass spinning in the opposite direction relative to the outside observer.

当他闭上眼，使陀螺仪面向他反向旋转（看图 25-D2）。当他睁开眼，向下按“同”一个陀螺仪的轴。因为他观察到陀螺仪轴向右运动，他也许会武断的称这样的轴向运动为“正极”。这种主观的描述指示有两个不同的陀螺仪。然而，你和我都知道不是这样的。实际上，之所以相信有两个陀螺仪而不是相同的一个是因为：一个陀螺仪简单的使它的物质相以于观察都在相反的方向旋转。

E. I will now quote to you a statement I made on the occasion of my "humbling" realization of this simple fact described in Section 25-D in conjunction with the basic entity of all matter. I clearly recall the occasion in 1968 while flying on a commercial airline at 30,000 feet and returning home from a trip to Washington, D.C. which concerned another patent application:

E.我将为你引用一段声明，在我非常“羞愧”的发现 25-D 部分描述的所有物质基本实体交互方式的简单事实之际。我清楚的回忆到 1968 年，乘坐飞机在 3000 英尺高空，从为另一个专利去华盛顿的路上加家。

"I SIT IN AWE UPON THE REALIZATION OF THIS INGENIOUS MECHANISM THAT IS SO SIMPLE THAT IT BEFUDDLES THE MIND. MAGNETIC FIELDS AND ELECTRICAL FIELDS ARE INDEED EQUAL. THEY ARE ONE AND THE SAME. "

“我久久惊叹于对这种独特的结构的认识，它如此简单以致使人使迷惑不解。磁场区域和电场区域实际是相同的。它们是相同的一个事物。”

Extrapolating upon my "humble" thought, I concluded: consider the possibility that if you could exert enough force to flip over this basic gyroscopic-action-particle of matter 180 °, then to an outside observer it would appear to be an opposite, electric charge. Since this is true, then the basic mechanism of nature is even more ingenious than I suspected because: all matter is composed of one type of gyroscopic-action-particle. Moreover, by mechanically rotating (in varying degree directions) the gyroscopic- action-particles, such particles are capable of exerting a "force influence” upon one another. Such a "force influence" causes the gyroscopic-action -particle to gyrate (relative to one another) and subsequently, ***such infinitely-possible-degree-gyrations form infinite types of matter.***

基于我“羞愧”想法的推断，我总结到：考虑这种可能性，如果你用足够的力将祖陀螺效应子翻转 180^0，在外部看它将是相反的，电荷。如果这是真的，那么理论的基础结构将比我想的更精巧，因为：所有的物质由一种陀螺效应子组成。再者，通过机械的旋转（在不同的方向）陀螺效应子，这种粒子能对另一个发挥“力的影响”。这样的“力的影响”引起陀螺效应子随后回旋（相对于其它），**这种初始可能角度的回旋来自初始的物质类型**。

"All matter is composed of one type of gyroscopic-action-particle. "

“所有的物质由一种陀螺效应子组成。”

Such a perspective is consistent with all Matter in the Universe being composed of the same entity having an attraction of one towards another. Mathematically, this explains the consistency of the Laws of Magnetism, Electrical Charge, and Gravity.

这样一种观点基于所有宇宙中的物质由相同相互吸引的实体组成。在数学上，这解释了磁力、电荷、重力的定律。

第 11 章 光

Chapter 11 LIGHT

"Planck's discovery of the quantum in 1900 drove a crack in the armor that still covers the deep and secret principles of existence. In the exploitation of that opening we are at the beginning, not the end. Someday we'll understand the whole thing as one single marvelous vision that will seem so overwhelmingly simple and beautiful that we will say to each other -Oh, how could we have been so stupid for so long? How could it have been otherwise! "

- John Archibald Wheeler

“1900 年普朗克的量子发现打破了存在的深奥神秘的法则的外壳。”对它的研究让我们知道我们在一个开始机而不是结束。某一天，我们将明白所有的东西都由一种独一无二的不可思议的东西组成，它仿佛难以至信的简单美好以至于我们奔走相告-噢，我们怎么能愚蠢这么长时间？否则世界将是什么样子！”

-约翰・阿奇博尔德・惠勒

F. I will now demonstrate that the "gyroscopic-action-particle" which comprises all matter will mechanically explain other scientific facts which have not been mechanically explained before this time.

F.我将证明组成所有物质的“陀螺效应子”将力学的解释在这之前其它不能被力学解释的科学事实。

Consider that the existence of the "gyroscopic action-particle " also explains the duality of the wave and particle theories of light. Light is electromagnetic in nature and consists of "negative” and "positive" (see discussion of "negative" and "positive” in Section 25-D) gyroscopic particles traveling in the same direction and having opposite spins. When the axis of the gyroscopic particles are affected as they mechanically collide with different materials at varying angles, the gyroscopic particles will therefore behave as particles or a wave. If one "hits" the axis of a gyroscope "head on," it will not pivot.

“陀螺效应子”的存在也解释了光的波粒二相性的理论。光有自然的电磁性，由“负”和“正”（看 25-D 部分关于“负极”和“正极”的讨论）陀螺子在同一方向相反旋转运动组成。当陀螺子的轴和不同材料在不同角度力学碰撞，陀螺子行为将因此像粒子或波。如果“迎头”“撞击”陀螺仪的轴，它不会进动。

The following information corroborates the prior information I have presented in this Book. I urge the reader to Master the Mechanical Essence of this material. The material demonstrates that one must pay strict attention to the sub-atomic composition (gyroscopic spin) of all matter which is pertinent to those varying technical designs utilizing Einstein's equation of $E=MC^2$ on a 100% conversion-efficient basis.

下面的信息证实我先前在这本书中展现的信息。我催促读者精通这种材料的力学本质。材料证明必须严格关注所有物质的次原子级结构，对于利用爱因斯坦的 $E=MC^2$ 的 100%转化率的科学设计这是相当中肯的。

"Light is electromagnetic in nature and consists of 'negative' and 'positive' gyroscopic particles traveling in the same direction and having opposite spins."

“光有自然的电磁性，由“负极”和“正极”陀螺子在同一方向自旋相反的运动组成。”

G. John Dalton (English chemist and physicist, 1766-1844) proved that when various elements were observed through a microscope, such elements appeared in different crystalline shapes. Crystals of gold always looked alike, crystals of copper always looked alike, but crystals of gold and copper never looked like one another.

G. John Dalton (英国化学家、物理学家，1766-1844)证明在显微镜下看到的很多元素有不同的晶体结构。黄金的结晶体是相似的，铜的结晶体是相似的，但黄金和铜的晶体从来不一样。

It has also been proven that a sharp "hit” will easily break crystals at certain mathematical points and will not easily break the crystals at other points.

同样证明，在一个精确的点猛击很易容打碎晶体，但在其它点不容易。

Considering the two preceding paragraphs, it is obvious that the energy comprising different crystals representing different elements has an attraction force throughout the crystal. This attraction force is greatest along a particular plane: the GYROSCOPIC PLANE!

考虑前面两段话，很明显，组成不同晶体代表不同元素的能量存在一个贯穿晶体的吸引力。吸引力完全沿着一个特定的而：陀螺仪的平面!

H. Observe the effects of light polarization by certain crystals:

H. 观察特定晶体的光偏振效应：

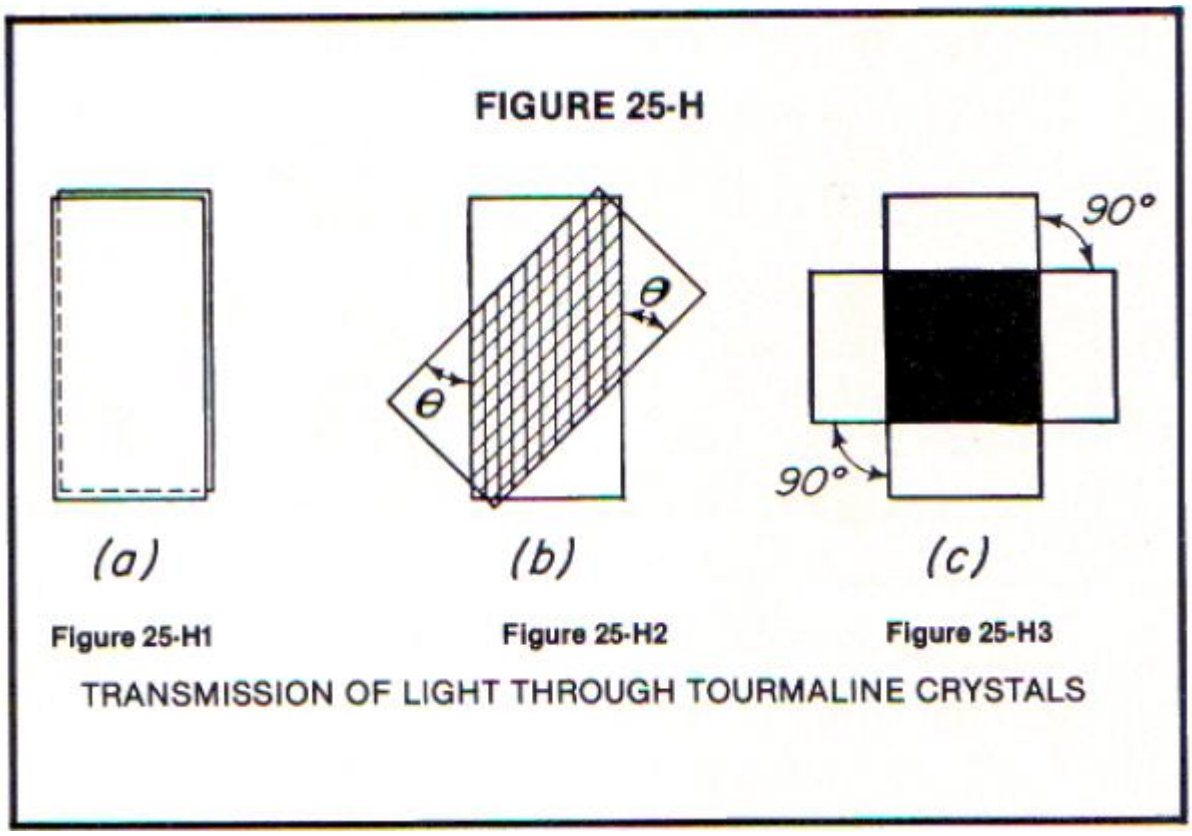


Figure 25-Hl Light is transmitted through crystal slabs having their crystalline axes oriented parallel with respect to one another.

图 25-Hl 光穿过晶体轴相互平行的晶体片。

Figure 25-H2 Less light is transmitted when one of the crystal slabs is rotated to a 45 ° angle with respect to the other slab.

图 25-H2 当晶体片相对另一个旋转 45 ° 时少量光可以穿过。

Figure 25-H3 No light is transmitted when one of the crystal slabs is oriented at a 90 ° angle with respect to the other slab.

图 25-H3 当晶体片相对另一个 90 ° 时没有光穿过。

As the angular degree of the crystal (composed of electromagnetic energy in the form of gyroscopic particles) varies, the amount of light (electromagnetic energy in the form of gyroscopic particles) also varies. Such a variation indicates that the crystal is held together with greater electromagnetic force along certain planes: the GYROSCOPIC PLANE!

当晶体（由陀螺子电磁场形式能量组成）角度变化时，光（陀螺子电磁场形式能量）的数量也变化。这样的变化指明，晶体是用沿特定平面的强大电磁力连接在一起的：陀螺仪的平面!

Sir David Brewster (Scottish physicist, 1781-1868) was the first to note that when light is incident at the polarizing angle, then the reflected and refracted rays are exactly 90 ° apart.

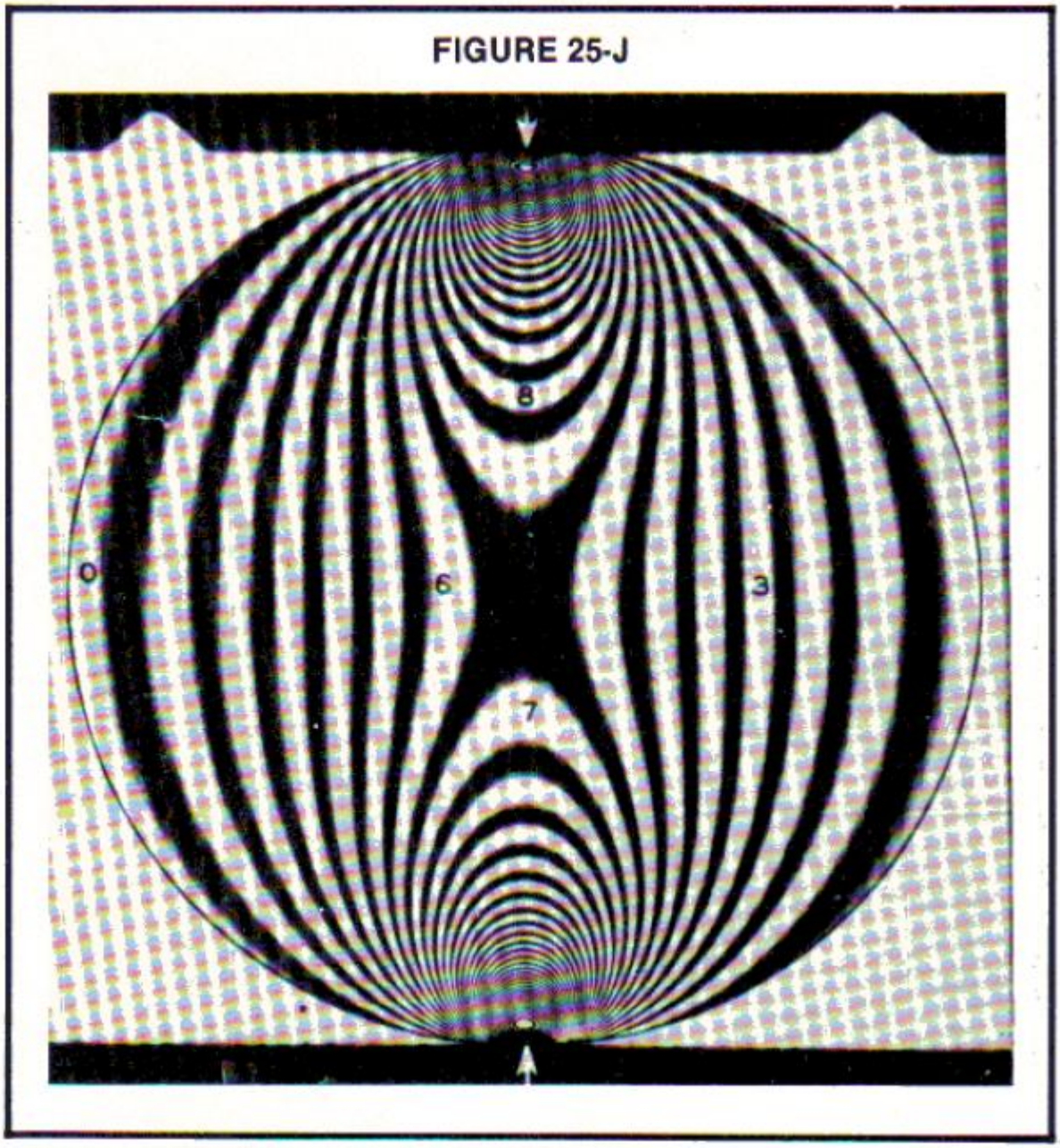
David Brewster 先生（苏格兰物理学家，1781-1868）第一个发现当光在偏振角入射，那么反射和折射光将精确的 90 ° 分开。

Notice that the 45 ° and 90 ° angles are significant in the application of force to light (electromagnetic energy). This effect matches the 45 ° angles of prisms and pyramids as well as the 90 ° angle important to a conductor system.

注意，45 ° 和 90 ° 角在对光（电磁力）施力时是非常重要的。棱镜和棱锥的 45 ° 角与导体系统的 90 ° 角同样重要。

J. What does the picture below represent?

J.下面的图片代表什么？



Does Figure 25-J appear similar to the forces generated by an electric or magnetic field? Actually, Figure 25-J represents a picture of a sheet of glass undergoing stress which causes the glass to doubly refract. If there was no physical (mechanical) strain upon the glass plate, the plate would have no effect upon the light passing through it. One may then conclude that when placed under stress, the glass plate releases a glimpse of its "secret" concerning the plane of its electromagnetic composition.

图 25-J 和电场或磁场区域产生的力相似吗？实际上图 25-J 是对一玻璃片施加压力，引起玻璃双倍反射形成的。如果玻璃板没有物理（力学）扭曲，将没有光穿过它的效果。也许有人会总结，当对玻璃板施加压力，玻璃板会显示它电磁结构的“秘密”。

K. Certain materials (liquid mixtures) have the property of rotating the plane of light polarization by an amount directly proportional to the length of the light path in the sample.

通过大量与样本中的光路长度成恰当比例的光路，特定材料（液态混合物）有旋转光偏振平面的特性。

(1)Some materials cause a rotation that is clockwise when viewed towards the light source.

(2)Some materials cause a rotation that is counterclockwise when viewed towards the light source.

(3)Observe that such rotations match my description of "negative" and "positive" charges. These negative and positive charges compose all matter and represent the same gyroscopic entity seeming to spin in opposite directions (when viewed from

the perspective of an observer).

(4)Observe that such rotations indicate that materials are either a little more negative or positive in charge depending upon their electromagnetic composition. Unless such is the case, why else would differing liquid solutions have reverse effects upon light (electromagnetic energy)?

(1) 当看向光源时，一些材料引起顺时针方向的旋转。

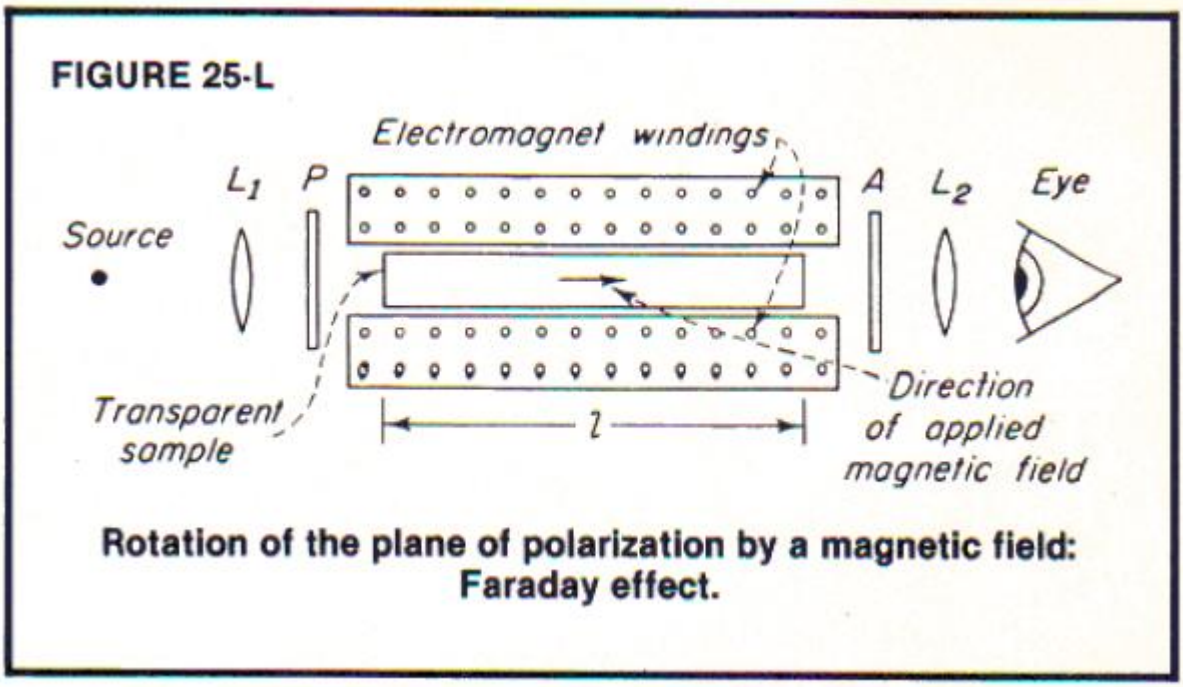
(2) 当看向光源时，一些材料引起逆时针方向的旋转。

(3) 观察这样的旋转是符合我“负”和“正”电荷的描述的。这些负和正电荷组成所有物质并表现为一些好像在相反方向旋转（当从观察者的视角看）的陀螺效应体。

(4) 这样的旋转指明，物质的负极性或正极性决定于它们的电磁结构。如果不是这样，为什么不同的溶液对光（电磁能量）有相反的效果。

L. The first connection between magnetism and optics was discovered by Michael Faraday in 1845. Faraday discovered that the plane of light polarization is rotated when polarized light is allowed to pass through an isotropic medium located within a strong magnetic field if the light travels in a direction parallel to the direction of the magnetic field. This observation demonstrates the effect of gyroscopic spins comprising light interacting with the gyroscopic-spin-composition of matter and magnetic energy with respect to the plane of gyroscopic spins of all interactions.

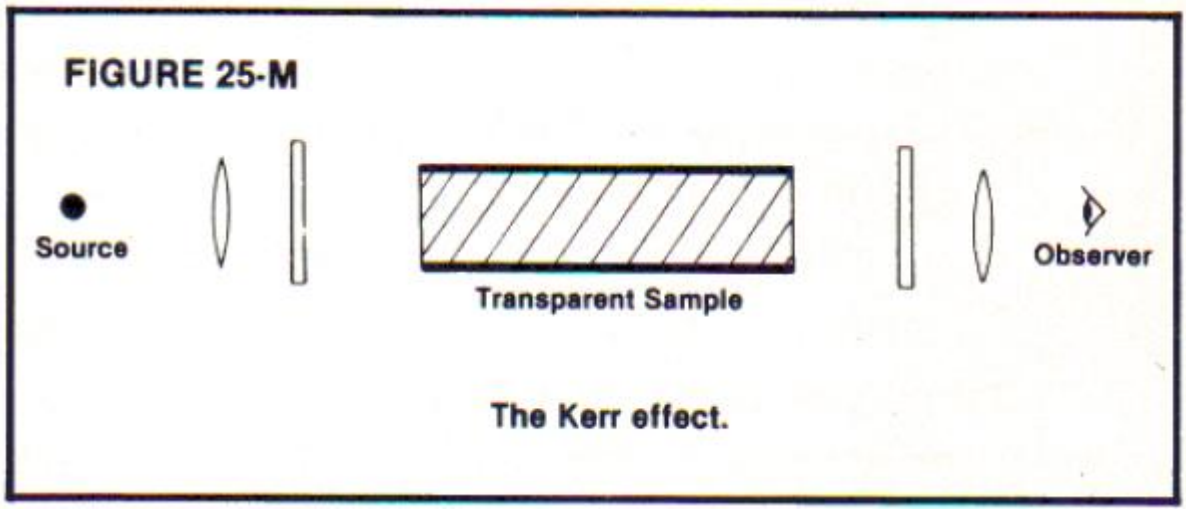
磁性和光的联系在 1845 年第一次被法拉第发现。法拉第发现，当偏振光穿过在磁场中的各向同性的介质，光的方向与磁场相同，偏振光的平面会旋转。这个发现证明陀螺自旋效果，包括光与物质的陀螺自旋结构交互和磁能与陀螺自旋平面交互。



Rotation of the plane of polarization by a magnetic field: Faraday effect.

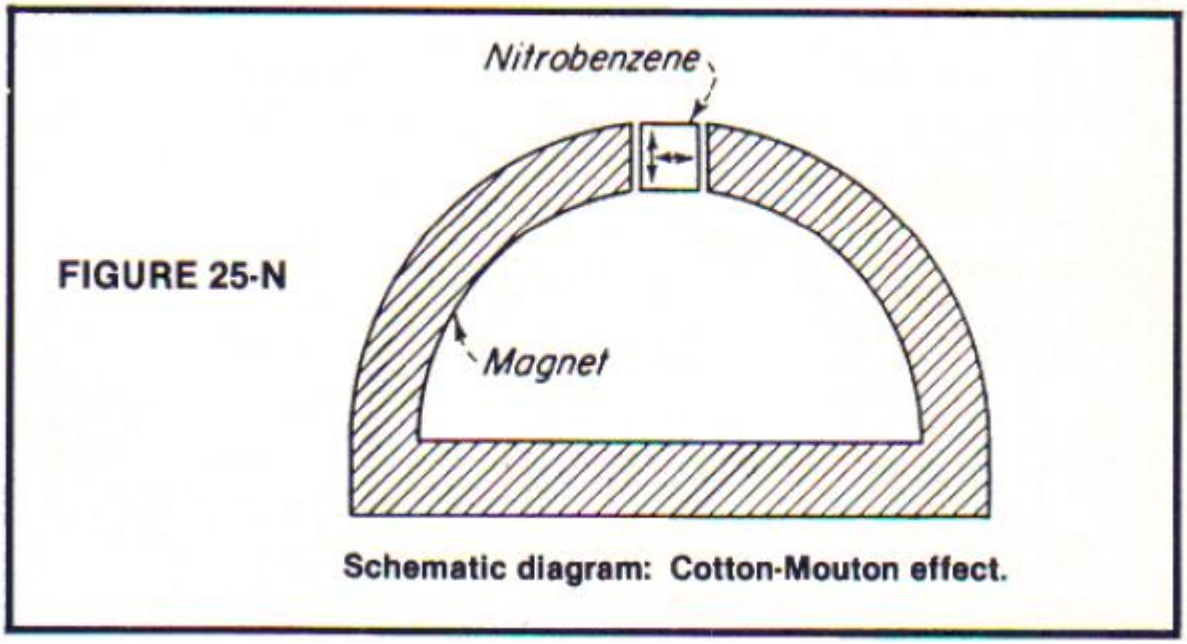
M. A related, magneto-optical effect to that of Faraday's was discovered by John Kerr in 1875. Kerr found that an isotropic optical medium placed between the plates of an electrical condenser became doubly refracting when the condenser is charged. This observation again demonstrates the presence of the gyroscopic spin or plane.

M. 1875 年 John Kerr 结出了对法拉第发现的磁光效应的描述。Kerr 发现各向同性的光学介质放在充电的电容器平板间，折射会倍增。这一观察又一次证明陀螺自旋或平面的存在。



N. An effect similar to that of John Kerr's was also discovered by A.A. Cotton and H. Mouton in 1907. They found that certain isotropic, optical media become doubly refracting when placed in a strong magnetic field. Such an observation again demonstrates the presence of the gyroscopic spin or plane.

N.1907 年 A.A. Cotton 和 H. Mouton 发现和 John Kerr'发现相似的效应。他们发现各向同性的光学介质放在一个强磁场中时，折射倍增。这一观察又一次证明陀螺自旋或平面的存在。



O. All of the above processes -which involve producing double refraction in a normally isotropic medium via the application of mechanical deforming forces, magnetic fields, and electrical fields -have a basic similarity: in each case, physical (mechanical) strains are produced within the medium which accordingly becomes anisotropic.

O. 上面所有过程-通过加压变形、磁场、电场，在正常的各向同性介质中产生折射倍增-有一个基本的相似点：在每个案例中，在介质中物理（机械）扭曲都会产生，因此变成各向异性。

Consequently, there is a definite, scientific pattern which emerges in the above observations: the gyroscopic composition of matter reacts to a proper force.

所以，一个明确、科学的模式在上面的观察中浮现：物质的陀螺结构对恰当的力作出反应。

(1) Observe that in all cases a force is applied which causes the electromagnetic composition of the material to react.

(2) Observe that in all cases the presence of electromagnetic energy is obvious.

(3) Therefore, in all cases the reactions were due to the material composition (electromagnetic energy) being affected by

the mechanical action of such electromagnetic energy (consisting of gyroscopic particles). Such reactions demonstrate the "action/reaction effect" created by the gyroscopic spin or plane which constitutes the basic mechanical structure of all matter.

（1）在所有的案例中施加一个力引起物质电磁组成做出反应。

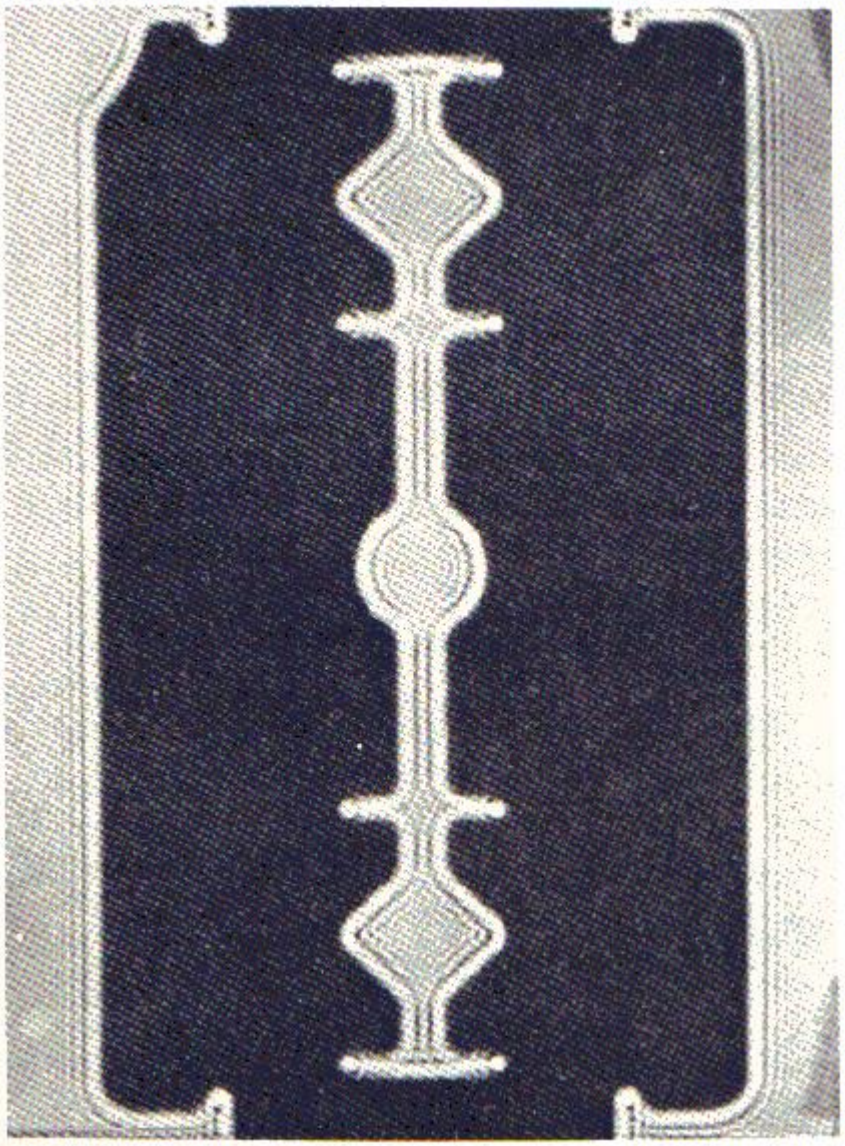
（2）在所有的案例中电磁能量的存在是明显的。

（3）因此，在所有的案例中反应归因于物质结构（电磁能量）被这样电磁能（由陀螺子组成）机械作用影响。这样的反应证明“交互效果”由构成所有物质基本力学结构的陀螺自旋或平面创建。

P. Such an "action/reaction effect" is observed in the following example:

P.这样一个“交互效果”在下面的例子里可以观察到：

FIGURE 25-P



Fresnel diffraction effects in the shadow of a razor blade.

The photograph in Figure 25-P depicts the effects of light (electromagnetic energy, i.e., gyroscopic particles) "colliding" with a material (a razor blade also composed of electromagnetic energy, i.e., gyroscopic particles) at an angle which graphically demonstrates the effect of the gyroscopic action and gyroscopic planes. Observe that the light and dark lines (which surround the outer periphery of the razor blade) form the conventional patterns of electric or magnetic "lines of force."

图 25-P 里的照片描绘了光（电磁能量，也就是，陀螺子）与物质（一个刀片，由电磁能量组成，也就是，陀螺子）在一个角度“碰撞”的效果，生动的证明了陀螺运动和陀螺平面的效应。观察光和黑线（环绕刀片的边缘）形成传统的电或磁“力线”的模式。

One should recognize that the light and dark lines are explained by my description of "negative" and "positive" charges which represent opposite spins of the gyroscopic-action-type-particle. The observed patterns in Figure 25-P will occur when such gyroscopic particles travel in the same direction (as light) and have their axes acted upon by a force which causes them to move at right angles to the imposed force as well as to one another. (This explanation satisfies both the wave and particle theories of light!]

应该认识到光和黑线由我的“负极”和“正极”电荷描述，代表陀螺效应子的相反自旋。图 25-P 观察到的模式发生在这样的陀螺子在相同的方向（如光），对它们的轴施加力导致它们在相对于力直角方向运动。（这种解释同时满足光的波动必和粒子性!）

As described in Chapter Three, a magnetic field consists of "negative" and "positive" particles -[the same gyroscopic particle is described as being either "negative" or "positive" via the direction of its spin with respect to the frame of reference of the outside observer] -with opposite spins and traveling in opposite directions like cars on one-way streets. In addition, when a conductor wire is applied (as a mechanical force) at right angles to those "negative" and "positive" particles , both "versions" of the single, gyroscopic particle traveled down the conductor wire in the same direction.

如第三章所描述的，磁场区域由“负”和“正”的粒子组成-[同样的陀螺子被描述为“负”或“正”是由它相对于外面观察者参考系自旋决定的]-相反的自旋并在相反的方向运动，像汽车在一条路上。另外，当导线相对于这些“负”和“正”粒子垂直运动时，两“种”单个的陀螺子在导线上同向运动。

注：反向运动是磁场，同向运动是电场。

It should now become apparent how light can be produced from an electric current which consists of gyroscopic particles traveling in the same direction with opposite spins.

由同向运动相反自旋陀螺子组成的电流如何产生光是显而易见的。

When light strikes an object (as the razor blade in Figure 25-P) at the appropriate angle, the gyroscopic particles (having clockwise and counterclockwise spins comprising the light) travel in opposite directions or have some alteration of their original direction. This mechanical action creates the image of an electric or magnetic field via the observed "lines of force." Such action should clearly demonstrate the gyroscopic effect of matter.

当光在恰当的角度撞到一个物体（如图 25-P 中的刀片），陀螺子（顺时针和逆时针自旋组成光）在相反方向运动或一些改变它们原始的方向。这种机械运动创建电或磁区域的图像，通过观察“力线”。这种运动应该清楚的证明物质的陀螺效应。

To summarize two important points:

总结两个要点:

A magnetic field mechanically consists of "negative' ' and "positive" gyroscopic particles having opposite spins and simultaneously traveling in opposite directions, e.g., the concentric "shells of force " surrounding a bar magnet. (Refer back to Chapter Three for a detailed analysis of this effect.)

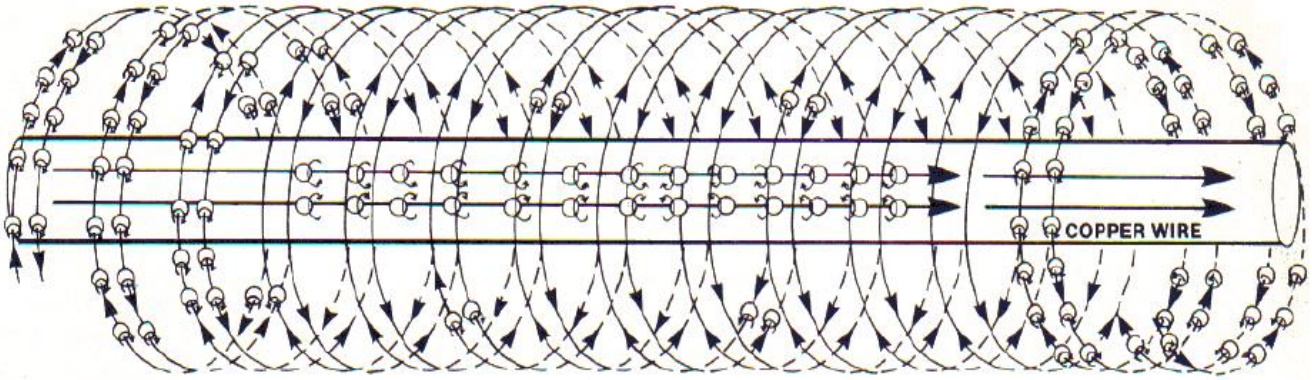
磁场区域由“负”和“正”陀螺子组成，有相反的自旋，同时运动在相反的方向，也就是说，环绕磁条的同轴“力壳”。（查阅第三章这种效应的详细分析）

An electric current mechanically consists of "negative" and "positive "gyroscopic particles having opposite spins and traveling in the same direction down a conductor wire -as does light traveling in space through a medium.

电流由“负”和“正”陀螺子组成，有相反的自旋，在相同方向沿导线运动-如光在空间穿过介质。

FIGURE 25-P

MAGNETIC FIELD AND ELECTRIC CURRENT



A **magnetic field** mechanically consists of "negative" and "positive" gyroscopic particles having opposite spins and simultaneously traveling in ***opposite*** directions, *e.g.*, the concentric "shells of force" surrounding a bar magnet.

An **electric current** mechanically consists of "negative" and "positive" gyroscopic particles having opposite spins and traveling in the ***same*** direction down a conductor wire — as does light traveling in space through a medium.

from original sketch by Robert J. Matherne

Further evidence of the gyroscopic effect of matter is demonstrated by the following:

进一步物质陀螺效应的证据列在下面：

(1) Every chemical element emits a characteristic spectral line when the atoms of the element are excited in a flame, furnace, or in an electric discharge. This again demonstrates the varying electromagnetic composition of different materials. [Since all matter is composed of the same gyroscopic particle, the electromagnetic composition of matter varies with the particular angle of incidence (plane of spin) for a given gyroscopic particle.]

These spectral line variations are similar to the light and dark lines that become visible when materials are placed under physical (mechanical) stress. Both of these effects are a result of the electromagnetic composition of all matter.

（1）每种化学元素发射一种特征光谱线，当元素里的原子在火焰、熔炉或放电环境里激发。这又证明不同的物质由不同的电磁组成。[因为所有的物质由同样的陀螺子组成，物质的电磁组成决定于给定陀螺子的特定入射角（自旋平面）。]

这些光谱线的变化同光和黑线相似，当对物质施加物理（机械）压力时变得可见。这些效应是所有物质电磁组成的结果。

(2) If the material comprising a prism is altered, the spectrographic lines will also change in their distance between one another. This effect corroborates my explanation that different materials are different electromagnetically, i.e., their gyroscopic planes vary. Consequently, the degree of deflection of penetration of different materials by light traveling at a 45 ° angle will vary continuously as will light deflection.

（2）如果组成晶体的物质改变，光谱线之间的距离也将改变。这种应该证明了我的解释，不同物质是不同的电磁场，也就是说，它们陀螺平面的变化。因此，光以 45 ° 角穿过物质偏移的角度是连续，如光偏移。

(3) Such action on the part of light is further evidenced by the Zeeman Effect. [Pieter Zeeman had searched for another magnetic effect upon light since he knew that Faraday had believed that another effect should exist.] The Zeeman Effect

represents the splitting of spectral lines into components of slightly different frequencies when the light source is placed in a strong magnetic field.

光的这部分行为被塞曼效应进一步证明。[塞曼已经寻找另一个光的磁效应，因为他知道法拉第相信有另一种效应的存在。] 塞曼效应表现为，将光源放到一个强磁场中时，光谱线分离为几条更细的谱线。

(5)In Sections 25-Q (2) and 25-Q (3) above, the described effects upon spectrographic lines are similar. Such lines are a characteristic of each element's gyroscopic (electromagnetic) composition. In (2) above, the spectrogram's lines vary when traveling through different materials having different gyroscopic (electromagnetic) composition. In (3) above, the spectrogram's lines vary under the influence of an external, electromagnetic (gyroscopic) field.

（5）的上面 25-Q (2)和 25-Q (3)部分，描述的光谱线的效应是相似的。这样的线是每种元素陀螺（电磁）组成的特征。在上面的(2)，当穿过由不能陀螺（电磁）组成的不同物质时光谱线变化。在上面(3)，在一个外部电磁（陀螺）区域影响下光谱线变化。

"All of the above observations demonstrate the importance of the gyroscopic-action composition of all matter and demonstrate that even slight changes (in materials via the gyroscopic angle of Incidence) can produce a noticeable difference in observed results."

"所有上面的观察证明所有物质陀螺效应的重要性，证明即使轻微的变化（物质中陀螺子入射角）在观察结果中能产生一个明显的不同。"

All of the above observations demonstrate the importance of the gyroscopic-action composition of all matter and demonstrate that even slight changes (in materials via the gyroscopic angle of incidence) can produce a noticeable difference in observed results.

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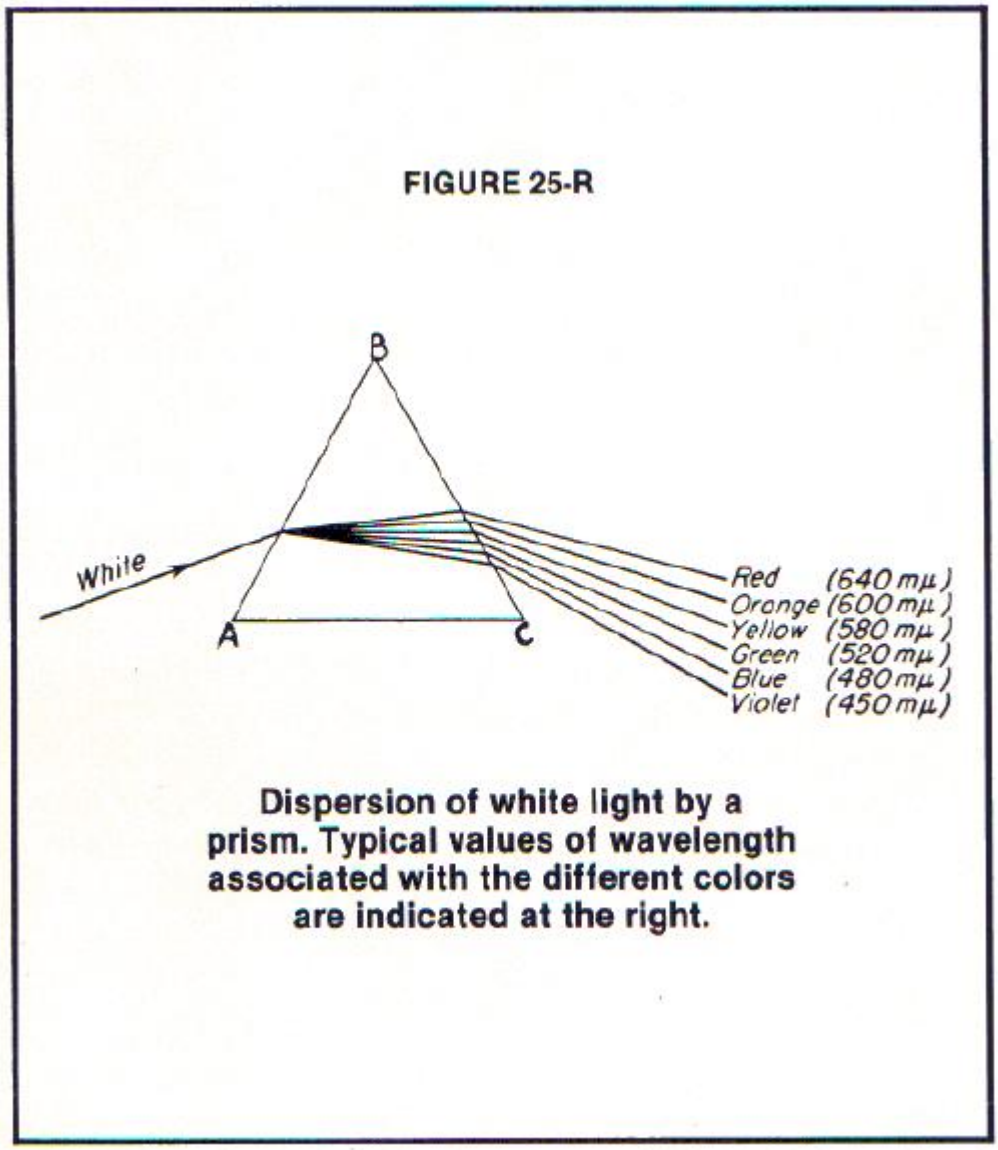
R. The following is additional evidence concerning the importance of the gyroscopic conception of matter:

R.下面是额外的证明，关于物质陀螺效应概念的重要性:

(1) The observed, spectrum "band" of colors produced when white light is dispersed by a prism actually varies in hue on a continuous basis from the violet to the red end of the spectrum. Such a spectrum is not composed of seven distinct "bands."

（1）观察被棱镜分开的白光产生的彩色光谱“带”的颜色变化，连续从蓝紫色到红。这样的光谱不是由 7 个分开的“带”组成。



(2) If one applies my description of "negative " and "positive" particles with opposite spins (gyroscopic action) to Figure 25-R, then the observed spectral results will be precisely explained:

如果把我描述的有相反自旋（陀螺运动）的“负”和“正”粒子应用到图 25-R，观察到的光谱结果可以被精确的解释:

REASON: The gyroscopic particles comprising light have opposite spin directions. These gyroscopic particles either collide with other gyroscopic particles comprising the atoms of the prism or they have an influence-force placed upon them by the gyroscopic particles comprising the atoms of the prism. This "collision" or "influence-force" mechanically occurs as a result of a close encounter between the loosely bound gyroscopic particles within the light causing such gyroscopic particles to move at right angles to the force exerted upon them by the more tightly bound gyroscopic particles within the prism. However, because of their opposite spins, the gyroscopic particles comprising light will move in opposite directions to that force as they encounter the gyroscopic particles within the prism, i.e., one gyroscopic particle within the light will move "right " (at some angle between 0 ° and 90 °) and the other gyroscopic particle (having an opposite spin) within light will move "left" (at some angle between 0 ° and 90 °).

原因：组成光的陀螺子有相反的自旋方向。这些陀螺子与组成棱镜原子的陀螺子碰撞，或它们受到一个组成棱镜原子的陀螺子施加的影响力。这种“碰撞”或“影响力”是光内松散边缘的陀螺子紧密交会的结果，引起这些陀螺子相对于棱镜内更紧密边缘陀螺子施加的力垂直方向运动。然而，因为相反的自旋，组成光的陀螺子将相对于力在相反方向运动，也就是说，光内的一种陀螺子将向“右”运动（以 0 ° 到 90 ° 之间相同的角度），另一类陀螺子（有相反自旋）将向“左”运动（以 0 ° 到 90 ° 之间相同的角度）。

Remember that light consists of gyroscopic particles moving in the same direction, but with a (possibly) equal number of

such particles spinning in one direction and a (possibly) equal number of gyroscopic particles spinning in the other direction. All such gyroscopic particles are interspersed throughout the general flow, direction of the light.

记住，光由在相同方向运动的陀螺子组成，但大量的陀螺子在一个方向自旋，等量的陀螺子在另一个方向自旋。所有陀螺子散布在光方向的区域。

In figure 25-R, the spectral lines travel to the left and to the right of the point where light (electromagnetic energy) first physically enters into surface AB at a 45 ° angle.

在图 25-R，光谱线运动到光（电磁能）第一次物理以 45 ° 角进入 AB 面的点的左和右边。

If you imagine numerous surfaces parallel to surface AB and oriented throughout the prism (which is actually a three-dimensional pyramid), then you will recognize that the gyroscopic particles of light vary continuously in their angular degree of penetration (of a 45 ° angle) as they pass through the material.

如果你想象大量表面平行于 AB 面并遍布棱镜（实际是一个三维金字塔），你将认识到光的陀螺子在它们穿透角度（45 ° 度）连续变化，如它们穿透物质。

The continuous variation in color hue is created by the continuous variation of "negative" or "positive" gyroscopic particles that exist in any one plane (surface) within the prism. [The electromagnetic function of the eye with respect to the brain is appropriate to how or what we visualize.]

色彩的连续变化是棱镜里任何平面（表面）的“负”或“正”陀螺子连接变化导致的。[关于大脑眼的电磁功能在我们如何或什么可见是恰当的。]

(3) The fact that infrared and ultraviolet light are located at opposite ends of the spectrum operationally means that one color "band" has more "negative" charges and the other "band" has more "positive" charges. Consequently, the two color "bands" represent different types of matter!

事实是红外和紫外光位于光谱相反的端，意味着一种色“带”有更“负”的电荷，另一“带”有更“正”电荷。因此，两种色“带”代表不同类型的物质!

From the beginning of my research, I have endeavored to prove that all matter is composed of a varying amount of "negative" and "positive" gyroscopic particles. In reality, each gyroscopic particle consists of identical gyroscopic-action-entitles which demonstrate both "negative " and "positive" characteristics depending upon the gyroscopic orientation of the spin with respect to the outside observer. Moreover, the arrangement of such gyroscopic-action-entities (via slight degree changes in their respective axes of rotation) can be infinite. Such infinity can generate infinite forms of matter.

从我研究的开始，已经全力证明了所有的物质是由大量“负”和“正”的陀螺子组成。实际上，每个陀螺子由相同的陀螺效应实体组成，表现为‘负’和‘正’特征是依赖于相对于外在观察者的陀螺自旋取向。同时，这种陀螺效应实体（通过自旋轴轻微角度变化）可以是无穷的。这路无穷可以产生无穷的物质形式。

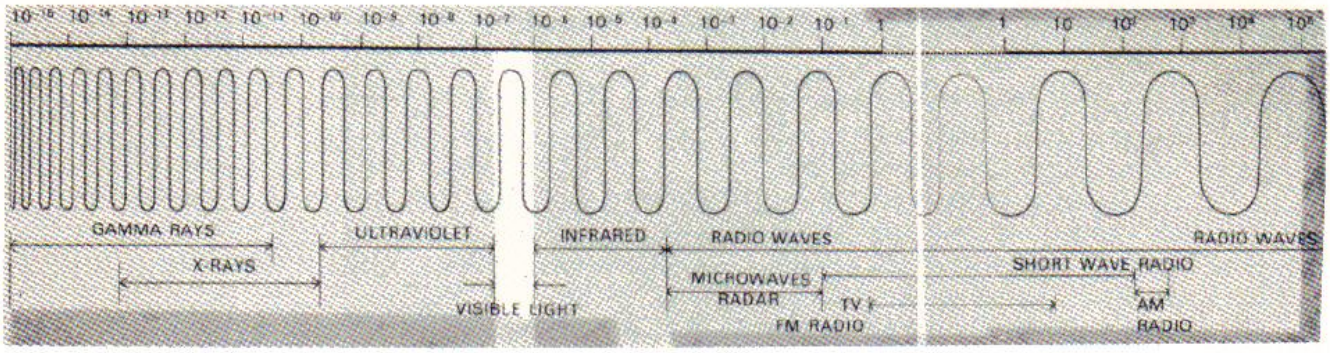
"In reality, each gyroscopic particle consists of identical gyroscopic-action entities which demonstrate both "negative" and "positive" characteristics depending upon the gyroscopic orientation of the spin with respect to the outside observer."

“实际上，每个陀螺子由相同的陀螺效应实体组成，表现为‘负’和‘正’特征是依赖于相对于外在观察者的陀螺自旋取向。”

Gyroscopic action also provides an explanation for the nature of X-rays which originate by separating electrical terminals while placed in a partial vacuum. Such a separation causes different amounts of "negative" and "positive" gyroscopic particles to be released, thereby forming another type of matter.

陀螺效应同时提供了对 X 射线现象的一种解释，X 射线产生于部分真空中的分开的电极。这种分离引起不同数量的“负”和“正”陀螺子被释放，因此形成另一种物质形式。

FIGURE 25-S



You may now be beginning to understand how the "spin" orientation of gyroscopic particles provides an explanation for all rays emitted by different materials. Such gyroscopic action ("negative" or "positive") is also verified by the fact that as certain rays are emitted from one type of material, that same material will undergo decay into another form of material. The new material is composed of a different quantity of "negative" and "positive" gyroscopic particles.

你现在也许开始明白陀螺子“自旋”取向如何提供不同物质发出所有光线的一种解释。这种陀螺效应（“负”或“正”）同样被事实证实，事实是特定光由同类型物质发射，同种物质将衰变为另一种物质形式。新物质由不同数量的“负”或“正”陀螺子组成。

The opposite effect is also true: by bombarding uranium atoms with neutrons (which are agglutinations of gyroscopic particles) the uranium is transformed into the heavier element transuranium.

相反的效应也是真的：通过用中子轰击铀原子（由陀螺子凝聚成），铀转化为超铀的重元素。

The differing forms of matter which are continuously observed in cyclotrons are forms generated by the interaction of "negative" and "positive" gyroscopic particles. There are infinite, possible forms that such matter can assume. Such infinite forms are caused by high-velocity particles reacting with "negative" and "positive" gyroscopic particles comprising (and traveling within) the tremendous electromagnetic fields generated by such units.

在回旋加速器里连续观察到的不同物质形式是由“负”和“正”陀螺子交互产生的。有无穷的可能形式可以呈现。这种无穷形式是由高速粒子与组成装置的极强电磁区域的“负”和“正”陀螺子交互形成的。

Based upon the electromagnetic field experiments of Michael Faraday, the electromagnetic theory of radiation was proposed by James Clerk Maxwell in 1865 and experimentally corroborated 20 years later in Germany by Heinrich Hertz.

基于法拉第电磁区域的实验，麦克斯韦在 1865 年提出了射线的电磁理论，20 年后由德国赫兹用实验证明。

It should be obvious from studying Figure 25-S that all rays have something in common: such rays are all electromagnetic energy and they are therefore composed of gyroscopic-action-entities.

学习图 25-S 可以明显看到，所有光线有一些共同点：都是电磁能量并且由陀螺效应实体组成。

What causes such rays to differ? I have endeavored to prove that the wave motion of these rays are caused by a variation in the number of "negative" or "positive" gyroscopic particles composing a given ray as well as the angular degree by which such rays are emitted from their source.

什么导致光线的不同？我已经尽力证明，这些光线的波动是由‘负’和‘正’陀螺子数量的变化引起的，它们组成指定光线和角度，光线来自发射源。

"The wave motion of these rays are caused by a variation in the number of 'negative' or 'positive' gyroscopic particles composing a given ray as well as the angular degree by which such rays are emitted from their source. "

“光线的波动是由‘负’和‘正’陀螺子数量的变化引起的，它们组成指定光线和角度，光线来自发射源。”

T. QUESTION: Have you Mastered what was taught in Section 25 above? If you have, then you must now realize the critical importance of understanding the mechanical, gyroscopic-action-entity comprising the atoms of all materials. Many such materials will be used in energy machines designed for 100% (conversion) efficient utilization of Einstein's equation of $E = MC^2$. Such an understanding will also permit the creation of new materials with varying electromagnetic characteristics.

T.问题：你已经精通了 25 部分教授的知识了吗？如果你说是，那么你必须认识到，理解所有物质原子都是由真实的陀螺效应实体组成的重要性。许多这种物质将用于设计遵守 $E = MC^2$ 等式 100%转化率的能源机。这种理解将允许用有变化电磁特性的物质创建能源机。

"The behavior of the gyroscopic particle can still be mechanically understood and operationally predicted in accordance with Newtonian Mechanics."

“陀螺子的行为依然可以用力学理解和用牛顿力学预测。”

By studying what I have written, you have glimpsed the Mechanical Essence of Quantum Mechanics: the Gyroscopic-Action-Particle. This "gyroscopic action-particle" is the basic building block of all matter and is the mechanical essence of $E = MC^2$. The behavior of the gyroscopic particle can still be mechanically understood and operationally predicted in accordance with Newtonian Mechanics.

通过学习我所写的，你已经对量子力学有了初步认识：陀螺效应子。这种“陀螺效应子”是构建所有物质的基础砖块，是 $E = MC^2$ 的力学本质。陀螺子的行为依然可以用力学理解和用牛顿力学预测。

If you have Mastered what I have earnestly sought to teach you up to this point, then you should have no difficulty in understanding and Mastering the teachings which will follow.

如果你已经精通我急切教授你的这个观点，你对理解下面教授的内容将没有困难。

第 12 章 有用的“功、力和能量”的等式

Chapter 12 USEFUL "WORK, FORCE, AND POWER" EQUATIONS

A. The mathematical equations involving "Work, Force, and Power" are engineering equations which satisfy the past and present-day industries of the world. They are not appropriate to future industries. Such equations are not universal, scientific equations and they do not satisfy a rigorous scientific scrutiny. The equations which I will propose below are scientific equations and do satisfy scientific scrutiny. In addition, these equations will fulfill the future engineering need of industry and will conceptually mesh with an understanding of the gyroscopic-action-entity which is the basic building block of all matter and represents the mechanical essence of $E = MC^2$.

A. 关于“功、力、功率”的精确数学等式只能满足过去和当前世界工业的工程要求。它们不适用于未来的工业。这种等式不是普遍科学的等式，它们不满足严谨的科学审查。我下面提出的等式是科学的等式，满足科学的严谨性。另外，这些等式可以达到未来工业的工程需要，在概念上与陀螺效应实体的理解匹配，实体是所有物质的基础砖块并是 $E = MC^2$ 的力学本质。

I will now define a "Force" in accordance with Newton's Laws:

我将定义和牛顿力学一致的“力”：

"A 'Force' is any action capable of causing a reaction from an entity which is in or may enter the influence of that 'Force'!"

“‘力’是可以引起一个进入‘力’影响范围实体反作用的任何运动!”

To an observer, "Force" may be perceived as "Obvious" or "Unobvious." I mathematically distinguish between "Obvious" or "Unobvious" Force. One cannot have (Obvious or Unobvious) "Work, Force, or Power" occurring without energy participation and transference.

对于观察者，“力”也许是“可见”或“不可见”。我区分“可见”或“不可见”力。不能有“功、力或功率”产生而没有能量参与和传输。

The consistent, semantic application of the terms Obvious or Unobvious to "Work, Force, or Power" will accurately stimulate the mind of the thinking individual which will further the progress of science and the improvement of the Human Race.

对于“功、力或功率”可见或不可见一致的、语义的术语应用将正确的激发个人的思想，将促进科学进程和人类进步。

B. It is the essence of the scientific method that a scientific theory should stand or fall with respect to whether its predictions correspond with the Facts. With this in mind, I will now apply the conventional mathematical formulas for Work, Power, and Force to a factual observation:

B. 科学方法的本质是一个科学理论好坏决定于预测结果是否和事实一致。基于这种思想，我将用传统功、功率和力的的数学等式观察事实。

FIGURE 26-B

"A man has a 400-pound mass placed upon his shoulders. The gravitational force pushes down with 400 pounds upon the man. The man pushes up with 400 pounds of force on the mass. The man supports the 400 pound mass for 10 minutes and then pivots from under the mass to permit it to fall. (Had the man continued to support the mass he would have become fatigued to the point of collapse and physical damage.)"

“一个人将 400 磅重量放到肩膀上。重力向下施加 400 磅在人身上。人向上施加 400 磅的力在物体上。人支持 400 磅 10 分钟，之后放开物质让它掉下来。(使人持续支持物体他将疲乏到倒下产生物理伤害。)”

WORK = FORCE * DISTANCE (by conventional mathematics)

功=力*距离（传统计算）

According to this simple formula, the man in the above example did no work.

根据这个简单的等式，上面的人没有做功。

POWER = WORK/TIME (by conventional mathematics)

功率=功/时间（传统计算）

According to this simple formula, the man in the above example exerted no power.

根据这个简单的等式，上面的人没有对外输出功率。

FORCE = MASS *ACCELERATION (by conventional mathematics)

力=质量*加速度（传统计算）

According to this simple formula, the man in the above example exerted no force.

根据这个简单的等式，上面的人没有对外施加力。

[I should point out that from the perspective of Statics, there is FORCE exerted but there is no POWER or WORK.]

[我将指出，从静态观点，有外部力但没有功和功率。]

Because the force of the man and the force of gravity upon the mass are equal and opposite, then conventional mathematics would state that there is a net force of zero.

因为人的力和重力在物体上相等并相反，传统计算将说净力为 0.

C. I will now examine the internal actions of the man in Figure 26-B to determine if the predictions obtained via conventional mathematics correspond with the Facts.

C.我现在将调查图 26-B 中的人内部的运动来决定传统预测与事实是否一致。

The Facts are as follows: During strenuous exercise or stress, the heart may pump eight times as much blood as in a period of relative relaxation, i.e., as many as 12 gallons a minute. All of the following conditions drastically increased while the man held the mass: the heartbeat, blood flow, breathing, oxygen flow, the electromagnetic stimulation of the brain and body cells, and the fermentation process to produce energy occurring within the muscle cells.

事实如下：在剧烈运动或加压时，心脏也许可能跳动可能是放松时的 8 倍，也就是说，一分钟 10 加仑。下面的情况在人抗住物体时都大大的增加了：心跳、血的流速、呼吸、氧流动、大脑电信号和身体细胞，这复杂的进程在细胞内产生能量。

Internally speaking, the man did produce Work and Power which resulted in the man producing a Force. Internally speaking, Potential Energy was converted to Kinetic Energy. It is important to note that the Potential Energy of the mass being supported by the man was a direct result of the internal, Kinetic Energy within the man. In essence, the presently -accepted, mathematical equations concerning Work, Power, and Force do not correspond with the facts.

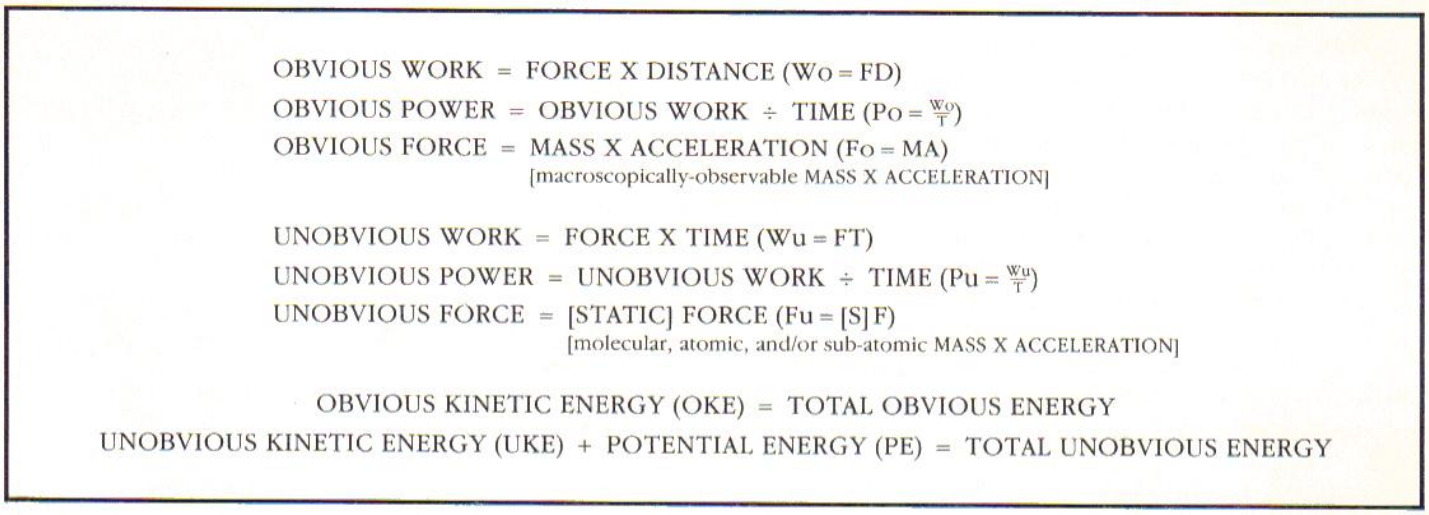
内在讲，人确实产生了功和功率导致人产生了力。内在讲，势能转化为了动能。注意，人支撑物体的势能是人内存动能的相撞结果。本质上，当前可接受的关于功、功率和力的数学等式与事实不一致。

D. To properly view the Facts from a scientific basis, the man in the above experiment did produce Unobvious Work, Unobvious Power, and Unobvious Force. Until he dropped the 400-pound mass, both the man and gravity exerted a force. Consequently, the net force could not be zero -only the net movement was zero.

D.从科学角度看这个事实，上面的人产生了不可见功，不可见功率和不可见力。在他抛下 400 磅物体之前，人和重力都施加一个外力。因此，净力不为 0-只是净运动为 0。

E. By subjecting them to proper scientific scrutiny, the presently-accepted, mathematical formulas describing Work, Power, Force, Potential and Kinetic Energy are not scientifically accurate! I propose that more explicit and scientific mathematical formulas would be as follows:

E.通过科学审查，当前可接受的描述功、功率、力、势能、动能的数学公式是不科学不精确的！我提出的更明确和科学的数学公式如下：



可见功=力*距离（Wo=FD）
可见功率=可见功/时间（Po=Wu/T）
可见力=物质*加速度（Fo=MA）
[宏观可见物质*加速度]

不可见功=力*时间（Wu=FT）
不可见功率=不可见功/时间（Pu=Wu/T）
不可见力=[静态]力（Fu=[S]F）
[分子、原子和/或次原子的质量*加速度]

可见动能（OKE）=所有可见能量
不可见动能（UKE）+势能（PE）=所有不可见能量

The above mathematical formulas do correspond with the facts. They satisfy all previous requirements as well as the example of the man supporting a 400-pound mass. The man did produce Unobvious Work, Unobvious Power, Unobvious Force, and Unobvious Kinetic Energy. He did not produce Obvious Work, Obvious Power, Obvious Force, or Obvious Kinetic Energy.

上面的数学公式是和事实一致的。它们满足所有上面人抗 400 磅物体例子的要求。人产生了不可见功、不可见功率、不可见力和不可见动能。它没有产生可见功、可见功率、可见力功或可见动能。

The L. Pearce Williams biography on Michael Faraday states that during the early years of Faraday's intellectual development, Faraday was very impressed with a book written by Dr. Isaac Watts entitled, The Improvement of the Mind. As a disciple of John Locke, Dr. Watts continually emphasized the importance of the observed fact and the dangers of imprecise language. In his book, The Improvement of the Mind [published in London, 1809], Dr. Watt cautions the student to carefully distinguish between words and things lest he "feed upon husks instead of kernels." Dr. Watt's emphasis upon careful observation and precisely described facts equipped Michael Faraday with a seemingly infallible guide, i.e., the essence of the scientific method. I wish to provide you, the reader, with the precise, mathematical equations which I have presented above in order to permit a better scientific understanding of matter.

L. Pearce Williams 在法拉第传记中说，在法拉第早年学习中，法拉第对瓦特写的 The Improvement of the Mind 一书印象非常深刻。作为约翰・洛克的信徒，瓦特先生连续强调观察到的事实和不精确语言的危险的重要性。在这本眉目里，The Improvement of the Mind[伦敦印刷，1809]，瓦特先生劝告学生小心识别单词等，唯恐他“注重外在而不是核心”。瓦特先生强调小心观察和精确描述事实给法拉第一贯正确的指导，也就是，科学方法的本质。我希望提供给你，读者，我上面提出的精确的数学公式，来对物质有更科学的理解。

F. It can now be scientifically observed from the facts that all static forces and all potential energies exist as a result of continuing, Unobvious Kinetic Energy . (Verify this fact by observing the Unobvious Kinetic Energy internally produced within the man as long as he supported the 400-pound mass on his shoulders.)

F.从事实可以看到，作为连续不可见动能的结果，所有的静态力和势能的存在。(通过观察人支撑 400 磅物体在肩上时内部产生的不可见运能可以证明。)

"It can now be scientifically observed from the facts that all static forces and all potential energies exist as a result of continuing, Unobvious Kinetic Energy."

“从事实可以看到，作为连续不可见动能的结果，所有的静态力和势能的存在。”

There are additional observations which verify the existence of Unobvious Kinetic Energy: materials both fatigue and break/collapse from supporting a force. Gas molecules "heat up" when compressed by a force. Such observations prove that materials react with Internal, Unobvious Kinetic Energy when a static force or Potential Energy is exerted against them.

证明不可见动能存在的其它观察：材料支撑力的疲劳和破裂/崩溃。当用力压缩时，气体分子“变热”。这种观察证明当对物质施加静态力或势能时它们与内部不可见动能反应。

G. To improve your understanding of my statements, consider Einstein's equation of $E = MC^2$. The nature of the mass-energy relationship is such that the mass (and weight) changes associated with Potential Energy conversion into Unobvious Kinetic Energy (which occurs internally within matter) is immeasurably small. Consider also that the gyroscopic-action-entity represents the Mechanical Essence of Einstein's equation of $E = MC^2$ and that the mathematical formulas I present properly account for the existence of the gyroscopic-action-entity.

G. 为了让你更理解我的陈述，考虑爱因斯坦的 $E = MC^2$ 方程。质能关系的理论是这样的，质量（和重量）的变化关系到势能转化为不可见动能 (发生在物质内部)，微小到不可测量。同时考虑到，陀螺效应实体代表爱因斯坦 $E = MC^2$ 方程的力学本质，我提出的数学公式恰当的说明了陀螺效应实体的存在。

EXAMPLE:

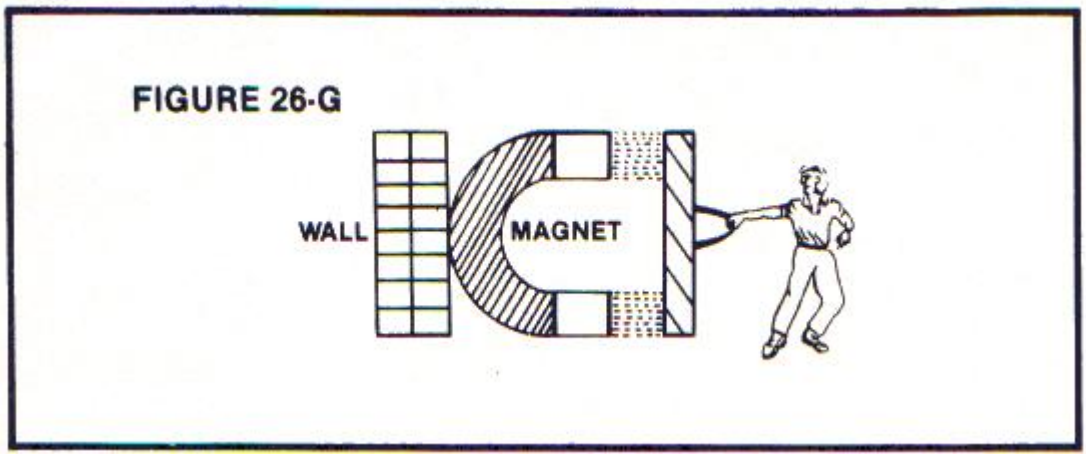
Newton's Third Law of Motion states: by the law of Action and Reaction, a Force must be resisted by an Equal and Opposite Force.

What does the mathematical term "equal" really mean? It means "identical in mathematical value or logical denotation; equivalent.”

例子:

牛顿运动第三定律说明：根据作用力和反作用力，力会产生大小相等方向相反的力。

数学术语“相等”意味着什么？意味着“数值或逻辑标准一致”。



According to Newton's Third Law: if I hold an iron material at a distance (see Figure 26-G) from a strong, permanent magnet (causing me to resist a constant attraction force of 200 lbs.) -what happens to me? I must use Unobvious, Internal Kinetic Energy to continually resist the attraction force of the permanent magnet. According to Newton's Third Law, the magnet must also be utilizing Unobvious, Internal Kinetic Energy to produce the constant attraction force, i.e., an "equal” action and reaction!

根据牛顿第三定律：如果我握住一个铁块与一个强永磁铁一段距离（看图 26-G）（让我抗拒一具 200 磅恒定吸引力）-对我来说发生了什么？我必须用不可见的内在动能来持续抗拒永磁铁的吸引力。根据牛顿第三定律，磁铁必须利用不可见内在的动能产生恒定的吸引力，就也是说一个“相等”的作用力和反作用力!

If the magnet were not to react with Unobvious, Internal Kinetic Energy, then Newton's Third Law would be defied. In resisting a continual, attraction force, I had to expend a constant, Unobvious, Internal Kinetic Energy. If the magnet produced a constant attraction force and did not utilize any Unobvious, Internal Kinetic Energy, then such observed results would be "opposite" and not "equal.” Hence, such a conclusion would be obviously incorrect.

如果磁铁没有与不可见的内在动能交互，将不服从牛顿第三定律。为了抗拒连续的吸引力，我必须使用一个恒定不可内在动能。如果磁铁产生一个恒定吸引力，但没有用任何不可见内在动能，那么这种观察结果将是“相反”并“不等”的。因此，这种结论显然是不正确的。

The Facts clearly show that the atoms within myself, the magnet, the iron material, and the wall all produced "Unobvious Work, Force, and Power.” There was no "Obvious Work, Force, or Power" produced.

事实清楚的说明，自己、磁铁、铁块和墙的原子都产生了“不可见功、力和功率”。没有“可见功、力或功率”产生。

H. I have presented more precise mathematical equations which are conducive to an improved scientific comprehension of Matter in accordance with the Mechanical Essence of Einstein 's Equation of E=MC2. Such a mechanical essence is represented by the gyroscopic-action-entity which is the basic building entity of all matter.

H.我已经提供了更多精确的数学公式，有助于增进对物质的科学理解，与爱因斯坦 $E=MC^2$ 方程力的本质一致。这种力学本质体现在构成所有物质基础实体的陀螺效应实体。

I. A PIONEERING SOURCE OF ENERGY:

I.开创性的能量源头：

Consider once again the equations Wu = FT,(Pu =Wu/T), and Fu = [S]F.

再考虑公式 Wu = FT、(Pu =Wu/T)和 Fu = [S]F。

A permanent magnet "X” that attracts an object "Y" with a constant force of 200 lbs., twenty-four hours a day for 30 days will have performed the following:

一个永磁铁“X”对一个物体"Y"的恒定吸引力为 200 磅，连续 30 天每天 24 小时将有如下结果：

Wu =(200) * (60 sec.) * (60 min.) * (24 hrs.) *(30 days)

Wu=518,400,000 lbs.-sec.

Fu = 200 lbs. constant

Pu = 200 lbs. constant

The gyroscopic energy in the magnetic field produced Unobvious Work, Unobvious Power, and Unobvious Force. The magnetic field also maintained Potential Energy via the use of Unobvious Kinetic Energy to accomplish this task. The mass loss is not easily measurable since we are describing the effects that generate atomic energy. As you know, we are discussing $E = MC^2$. The existence of the Gyroscopic Action-Entity exactly fits the First Law of Thermodynamics since it appears this Entity cannot be created or destroyed.

磁场区域陀螺子能量产生不可见功、不可见功率和不可见力。磁场区域同时通过用不可见动能保持势能来完成任务。质量的损失是不容易测量的，因为我们描述的效果产生于次原子级能量。正如你所知，我们讨论 $E = MC^2$。陀螺效应实体的存在精确的符合热力学第一定律，因为它出现了不能被创建的毁灭的实体。

The present utilization of atomic reactors as a source of energy production is extremely inadequate for the demand.

当前作为能量源的次原子反应器的利用对需求是严重不足的。

The energy machine I have innovated has no harmful side effects*, will cost little, and will be small in size compared to a nuclear reactor. All that I have written has been based upon the concept of the gyroscopic entity on which I started working in 1965. Since that time I have sought to prove or disprove this concept. The more I have learned the more certain I became of its truth.

我创建的能源机没有有害结果、花费少、可以作为小型核反应堆。所有我写的是基于我 1965 年开始研究的陀螺实体的概念。那时我就想证实这种概念是否正确。我学的越多我越觉得它正确。

If you have Mastered what I teach, then you must recognize the reality of my Pioneering Invention. However, the access to an unlimited source of energy is not by any means the ultimate discovery!

如果你已经精通我所教授的，那么你必须认识到我的创新发明白真实性。然而，通向无限能源的大门决不是最终的发现!

The energy machine I have innovated simply uses Universal Energy (the gyroscopic-action-entity). Such utilization must occur if man is to end his stupidity, hunger, greed, and wars -and advance to other solar systems! Consider how long it took our Species to discover how to harness the motion of flowing water via a simple waterwheel.

我发明的能源机是简单的利用了宇宙能源（陀螺效应实体）。这种利用会结束人类的愚蠢、饥饿、贪心和战争-进化到另一个太阳系。想一下我们人类通过简单水轮利用水的运动用了多长时间。

It has been obvious to me that what I have seen so clearly was unimaginable for most people. What I have seen is, at the very least, equal to the effect of Einstein's equation of $E = MC^2$. It gives me much contentment if you now understand what I have presented. This is the purpose of my Book.

很明显，我看到的对大多数人来说是不可想象的。我看到的是，最基本的，爱因斯坦 $E = MC^2$ 方程式的效果。如果你已经明白我所说的我将非常满足。这是我这本书的目的所在。

*Note: There are no harmful side effects because the size of the gyroscopic-action-entity is so small that it easily passes through the atomic structure of living tissue. In nuclear fission, the sub-atomic particles (representing agglutinations of gyroscopic particles) are far larger and can do damage to the atomic structure of living tissue. By analogy, if one threw a dust particle at a large fishnet, the particle would easily pass through the net. However, if one attempted to pass a large boulder (composed of millions of dust particles) through the same fishnet, it would cause damage to the net. By another analogy. my energy machine - in its utilization of nuclear energy - differs from conventional nuclear energy sources in the following manner: I have discovered a previously unknown source of "underground, unique running water." I have therefore devised a "waterwheel" (my energy machine) to tap into this existing energy of unique running water (the continual motion of the gyroscopic particles). The conventional nuclear energy approach would be to secure a cup of normal water and attempt to "smash" the normal water with a hammer to extract the atomic energy from the water. My process is 100%.(conversion) efficient and harmless (due to the minute size of the gyroscopic particles). Conventional nuclear fission is less than 1% efficient and harmful (due to the larger size of the released particles).

*注：完全无害，因为陀螺效应子实体的大小小到它可轻易穿过活组织的次原子结构。在核裂变中，次原子粒子（由陀螺子凝结成）更大，能伤害到活组织的次原子结构。通过分析，抛一个灰尘到一个鱼网，它可以轻易穿过网。然而，如果试图抛一个大石块（由无数灰尘结成）穿过鱼网，它将毁坏鱼网。依此类推，我的能源机-它利用核能-在以下几方面不同于传统的核能：我已经发现一种未知的“地下、唯一的活水”源头。我因此设计一个“水轮机”（我的能源机）利用这唯一活水（连续运动的陀螺子）存在的能量。传统核能是固定一杯水并试图用榔头“打碎”正常的水获取水中的次原子级能量。我的过程是 100%（转化）效率并无害（由于陀螺子的尺寸）。传统核能效率小于 1%并有害（由于释放粒子尺寸过大）。

第 13 章 静态实现（能源机）

Chapter 13 THE STATIC EMBODIMENT (ENERGY MACHINE)

"New and stirring things are belittled because if they are not belittled, the humiliating question arises: Why then are you not taking part in them?"

- H.G. Wells

27. The reader should now become aware that other physical embodiments of my Pioneering Invention can result by securing the proper, atom-oriented, current-carrying materials which have a proper geometric design, and are placed within the magnetic field of a permanent magnet.

27.读者现在应该意识到，我的开创必发明的其它物理实现可以通过固定恰当的、原子定向的、导电线形材料，并放一个永磁铁在里面实现。

A. QUESTION: How does one explain the effect of Lenz's Law which states that "the current induced in a circuit due to a change in the magnetic flux through it or to its motion in a magnetic field is so directed as to oppose the change in flux or to exert a mechanical force opposing the motion?"

A.问题：怎么解释楞次定律，定律说“电路中由磁场运动或磁通量变化引起的电流反抗磁通量变化或产生阻碍运动的力”？

ANSWER: Simple. If a proper, atom-oriented material (with the proper atomic [geometric] design) was placed within a magnetic field of gyroscopic-action-particles (which move at C and spin at C) in a configuration which caused current (gyroscopic particles) to flow, then it would be necessary to physically secure the proper, atom-oriented material within the Unobvious Magnetic Force Field. If not secured, then the proper, atom-oriented material would be physically repelled and the energy transfer of gyroscopic particles would cease.

回答：简单讲，如果合适的原子定向的材料（有合适的原子[几何]设计）放在陀螺子（运动速度 C 自旋速度 C）组成的磁场，布置引起电流（陀螺子）运动，那么在不可见磁性力区域内固定这合适的原子定向的材料是必要的。如果不固定，合适的原子定向的材料将被排斥，陀螺子能量传输将停止。

[Earlier in this Book, I have demonstrated that Lenz's Law was only an observtion which in fact described those gyroscopic particles deflected from a magnetic field. Because such deflection occurs, it can be concluded that the spin of such gyroscopic particles is at right angles to the spin of the gyroscopic particles which remain within and comprise the magnetic field itself.]

[这本书前面，我已经证明楞次定律只是一种观察，实际上描述的是陀螺子在磁场中改变方向的现象。因为发生方向的改变，可以总结出陀螺子的自旋垂直于组成磁场的陀螺子的自旋。]

Such physical repulsion of the proper, atom-oriented material is in accordance with Newton's Law of Action and Reaction!

这样恰当的原子定向材料的排斥是和牛顿作用和反作用定律一致的。

***Note: By the term "proper," I am referring to a mechanical understanding (of both the motion of the gyroscopic particles comprising a given electromagnetic field surrounding a magnet and the motion of the gyroscopic particles within the atoms of the proper material) which permits one to construct an energy machine designed for the efficient utilization of the maximum number of gyroscopic particles existing within all interacting systems, i.e., the stationary magnet's kinetic magnetic field and the proper material.*

***注意：通过术语“恰当的”，我指的是一种力学理解（关于组成磁体周围电磁场的陀螺子运动和合适材料原子中陀螺子的运动），这让你可以最大量的使用交互系统中的陀螺子来创建一个能源机，也就是，固定的磁体的运动磁场和合适的材料。*

In addition, the specific atomic structure (physical orientation) of the energy machines materials - such as the proper material - will differ from element to element or compounds in terms of how such varying atomic structures (containing billions of gyroscopic particles) will deflect exterior gyroscopic particles impinging upon the gyroscopic particles contained within such atomic structures.

另外，能源机材料-如合适的材料-特定的原子结构（物理上）不同元素间是不同的，这样变化的原子结构（包含亿计的陀螺子）会改变外部的陀螺子，当外部陀螺子与这种原子结构中的陀螺子碰撞时。

B. I have not physically constructed the STATIC ENERGY MACHIN E design just described, but this does not alter the fact that what I teach outlines the means for such construction. SAMPLE DESIGNS:

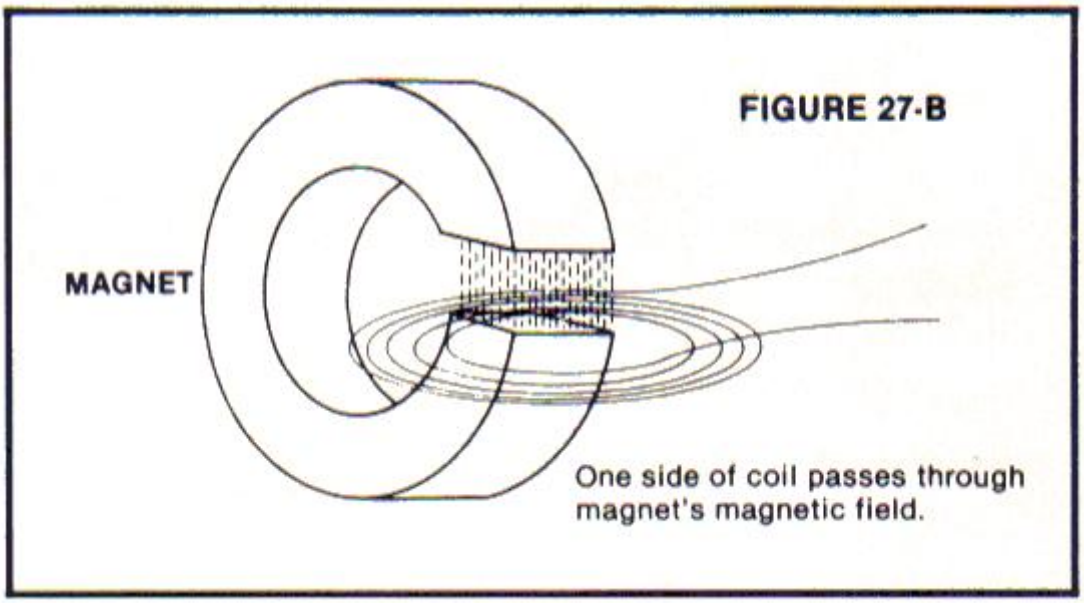
B.我没有完全构建刚才描述的能源机设计，但这没有改变我教授的这种结构的要点。简单的设计：

(1) I should recommend utilizing a uniform magnetic field as evidenced by that generated with a strong, horseshoe magnet or other means. (See Figure 27-B.)

(1) 我建议用一个匀强磁场区域，如强马蹄磁铁产生的磁场或其它方法。（看图 27-B）

(2) The utilization of a proper, atom -oriented coil with the correct geometric design is critical to the success of the system. It would be better to have only one side of the coil within that particular magnetic field to avoid the "cancellation effect." (See Figure 27-B.) (There could be additional magnets placed in proper current polarity around the proper, atom-oriented coil.]

(2) 对线形设计的合适的原子定向的线圈的利用对于系统的成功是关键性的。最好使线圈的一侧在特定磁场区域，避免“抵消效应”。（看图 27-B）（可以在线圈周围合适的电流极性处放额外的线圈。）



(3) With respect to the question of producing the proper, atom-oriented material, it should be noted that when formed by conventional production techniques, i.e., the use of heat, most materials appear to align their atoms in random directions.

（3）谈到合适的原子定向的材料制作的问题，要注意，当用传统工艺成型时，也就是，用加热，大部材料会使它们的原子随机排列。

A. ONE METHOD OF CREATING THE PROPER, ATOM-ORIENTED MATERIAL:

A.创建一个合适的原子定向材料的方法。

As Michael Faraday proved, neutrality to a magnetic field does not exist! All materials are aligned parallel or across lines of Unobvious Force when such materials are suspended within an extremely powerful magnetic field. If a material undergoing atomic formation is cooled within this powerful magnetic field, then the atoms of the material will assume a particular alignment. The atom-alignment-direction of the material could be changed if the magnetic field was aligned at 90 ° to the material or at any degree less than 90° to the material. Such induced atom- alignment would result in the atoms (of a given material) containing gyroscopic-action-entities having orientations principally along the same axis and at any desired angle of atom alignment with respect to the proper material's length. Thus, such material would possibly become a proper, atom-oriented material.

法拉第证明，中性的磁场区域是不存在的!当材料悬在一个极强的磁场中时，所有的材料被平行排列或穿过不可见的力线。如果材料原子被强磁场变冷，材料原子将呈现特定排列。材料原子排列的方向可以通过改变磁场区域与材料成 90 °实现，或相对材料任何小于 90°的角。这种感应原子排列将导致原子（给定的材料）中的陀螺效应实体大部分沿

一个方向，在合适材料长度产生任何希望的原子角度排列。因此，这种材料将变成合适的原子定向材料。

"Even the slightest degree alteration in atomic-axis-alignment can produce a significant change in results obtained."

“即使原子轴线排列最小角度的改变，在结果中也可以产生一个重大的改变。”

D. I again stress that nothing in the energy system's design can be taken for granted! Even the slightest degree alteration in atomic-axis-alignment can produce a significant change in results obtained. Refer to Sections 25-F through 26, and you will observe visual facts which confirm the truth of this statement.

D. 我强调，在能源机设计中没有东西可以假定！即使原子轴线排列最小角度的改变，在结果中也可以产生一个重大的改变。在 25-F 到 26 部分，你可看到关于这个说法的可见事实。

E. However, merely having atom-alignment is insufficient to produce the desired results. The utilized material (with its particular atom-alignment) should produce very little (if any) magnetic field (gyroscopic particles) in the surrounding area beyond the physical dimensions of the material itself. It is obvious from the facts of science that different materials produce results which vary significantly. (As proof of this, simply look at the wide diversity of conductors, semi-conductors, and non -conductors.)

E. 然而，仅仅有原子排列还不足以产生希望的结果。利用的材料（有特定原子排列）将在材料外部空间产生一个非常小的磁场区域（陀螺子）。科学事实明显的说明不同的材料产生的结果是非常不同的。（证明这点，可以看广泛的多样的导体、半导体和非导体。）

F. It is very likely that the proper, atom-oriented material will have a different atomic alignment than that of a conventional magnet containing atoms generally aligned along a certain axis which causes the release of an External Magnetic Field. In the proper, atom -oriented material, the magnetic energy (resulting from such atom orientation [alignment]) will be primarily contained within the physical boundaries of the material itself. The intent of such a system is to have the gyroscopic particles of the External Magnetic Field interact with the atoms comprising the proper, atom-oriented material. This will result in the proper Force being applied to the axis of those gyroscopic particles being emitted from the external, magnetic source. When this occurs, the gyroscopic particles (from the external magnetic source) will move at right angles to that proper Force, but all particles will move in the same direction. [It may be desirable to have fine conducting wire impregnated within the proper material.]

F. 和传统磁体原子没一个轴线排列释放外部磁场非常类似，合适的原子定向材料有不同的原子排列。合适的原子定向材料，磁场能量（原子定向[排列]的结果）将主要包含在材料的物理边界上。这样的系统目的是外部磁场区域的陀螺子与组成合适的原子定向材料原子的陀螺子交互。这将导致恰当的力施加到这些来自外部磁场源的陀螺子的轴。当这发生时，陀螺子（来自外部磁场源）将相对恰当力直角方向运动，但所有的陀螺子将在相同方向运动。[在合适材料里放入细导线将产生希望的效果。]

"In the proper, atom-oriented material, the magnetic energy (resulting from such atom orientation [alignment]) will be primarily contained within the physical boundaries of the material itself."

“合适的原子定向材料，磁场能量（原子定向[排列]的结果）将主要包含在材料的物理边界上。”

G. Ordinary materials may be possibly converted into proper, atom-oriented materials by subjecting the ordinary material to cryogenic temperatures. Such temperatures would reduce the random atomic motion within the material and cause the atoms to move towards a general axial alignment.

G.普通的材料通过低温处理可以转换为合适的原子定向材料。这种温度将减少材料中原子的自由运动，引起原子向一个轴向排列。

H. In addition to other methods, one can employ contained, high pressures (or stresses) to possibly produce atom alignment. The atoms of all materials will react to a sufficient, external force.

H. 另外一种方法，你可以通过高压（压力）产生原子排列。所有材料原子将与足够的外部力作用。

I. In effect, it will be essential to develop the correct techniques for the production of proper, atom-oriented materials

which achieve an atom alignment possessing internally-contained force fields which can be coupled with the Proper Geometric Design of the system. Such a system will generate the controlled release of electrical energy from magnetic fields of Unobvious Force when the proper, atom-oriented material is physically secured within the lines of Unobvious Force comprising the External Magnetic Field.

I. 实际上，关键是发展正确的科技生产合适原子定向材料，它形成原子排列，有内控力区域，用于结合系统恰当的线形设计。当合适原子定向材料固定在外部磁场区域组成的不可见力线里时，这种系统将产生来处于不可见力磁场区域的可控释放的电能。

To create such a system will require standard testing as demonstrated in the 19th Century by Thomas Edison's perfection of the design for the light bulb.

为了创建这样的系统需要标准的实验，如 19 世纪爱迪生设计灯泡那样。

The atoms of a conductor align at right angles to the input current in a circular configuration within the conductor. By the time this Book went to press, Mr. Newman had developed a detailed explanation of this process which will be presented in greater detail in the Second Edition.

在一个导体环路中导体原子相对于输入电流直角排列。到这本书要出版时，纽曼先生已经发展出对于这个过程更详细的解释，这将在下一版里更详细介绍。

第 14 章 电磁区域里粒子的效果展示

Chapter 14 EFFECTS DEMONSTRATED BY PARTICLES WITHIN ELECTROMAGNETIC FIELDS

28. I will now discuss another EMBODIMET of my Pioneering Invention.

28. 我将讨论另一个我的开创性发明的实现。

A. The following is a DECLARATION by Dr. Roger Hastings (who deserves the reader’s respect):

A.下面是 Roger Hastings 博士的宣言（值得读者尊重）：

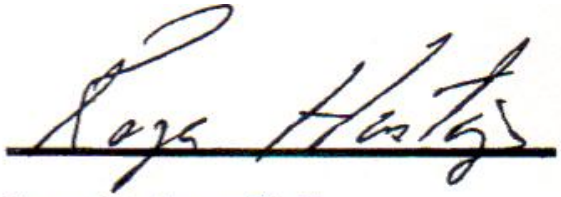
DECLARATION

April 29, 1982

Mr. J.W. Newman has shown me a demonstration in which lead powder placed gingerly onto the surface of water exhibits a most interesting property. Nearly microscopic streamers of lead immediately flow down into the water from the lead dust on the surface. Viewed under the microscope, the particles in the streamers appear as brilliant sparks of light. The streamers swirl in a vortex motion. Having believed that lead is inert to water, this demonstration gave me considerable surprise, and markedly raised my opinion of Mr. Newman as a Scientist. My graduate and postdoctoral training was in the field of condensed matter (solids and liquids), and I am quite certain that Mr. Newman’s discovery would generate considerable excitement in this community of scientists. Applications of this discovery are very likely to be forthcoming. (Mr. Newman has already described an application in his declaration witnessed by his patent attorney, Mc. Pugh, on Aug.1, 1979.)

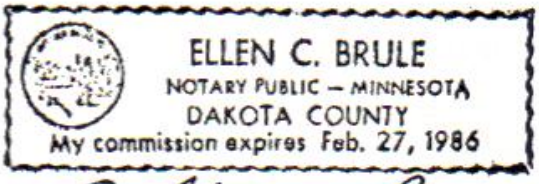
纽曼先生已经让我看了一个示范，将铅粉轻轻放到水表面，展示出许多有趣的性质。铅的微小彩带马上从水面的铅粉流入水中。在显微镜下，彩带中的粒子呈现出明亮的火花。彩带做涡旋运动旋转。已经相信铅是不与水反应的，这个展示让我相当吃惊，让我明显的认识到作为科学家的纽曼。我研究生和博士后研究的是浓缩物质（固体和液体）领域，这非常确信纽曼先生的发现在这个科学团体将相当令人振奋。这项发明的应用似乎马上会来临。（纽曼先生已经在这份声明里描述一个应用，1979 年 8 月 1 号由他的专利代理人 Mc. Pugh 见证。）

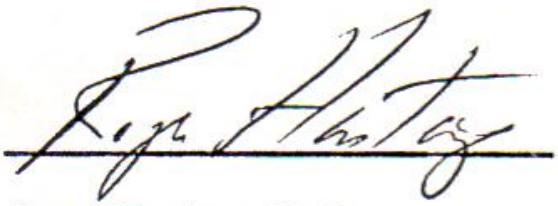
attorney, Mr. Pugh, on Aug. 1, 1979.)



Roger Hastings, Ph.D.
Principal Physicist
Sperry Univac Corporation

WAIVER
I am acting on my own in matters related to Mr. Newman's inventions, and am in no way representing Sperry Univac Corporation.





Roger Hastings, Ph.D.

B. The reader should realize that chronologically, the technological development of my Pioneering Invention occurred in the following sequence:

B. 读者应该认识到我开创性发明技术发展的时间顺序，顺序如下：

(1) The GAS EMBODIMENT

(described in Section 28-F)

气体实现

(2) The STATIC-EMBODIMENT

(described in Section 27A-I)

静态实现

(3) The CONDUCTING-COIL EMBODIMENT

(described in Sections 15 - 22)

导体线圈实体

The fact that I have developed three different EBODIMENTS of my Pioneering Invention proves that I have more clearly understood the "mechanical" essence of the gyroscopic-action-entity (acting in accordance with Einstein's equation of E = MC2), the nature of matter, and the nature of a magnetic field than those who utilize concepts taught by the Prior Art. Such is true because the facts clearly verify the validity of the "Mechanical," Technical Process which l teach - a process which adheres to the established Scientific Method. Let the facts verify my predictions; the result is a "Pioneering Invention."

事实上，我已经演化出三种不同的我的开创性发明实现，证明我已经更清楚理解陀螺效应子的“力”的本质（遵守爱因斯坦 $E = MC^2$ 方程），物质理论，磁场理论。这是如此真实，事实清楚证明我教授的“力学”、科技过程的正确性-遵守已经建立的科学方法的过程。让事实证明我的预测；结果是一个“开创性发明”。

C. I will now insert my technical papers referring to the process described by Dr. Roger Hastings in Section 28-A. These papers were witnessed by Mr. Emmett Pugh (my Patent Attorney with a physics background) on August 1, 1979 and were forwarded by Mr. Pugh to the U.S. Patent Office.

我将插入我的关于这个过程的技术论文，Roger Hastings 博士在 28-A 部分有描述。1979 年 8 月 1 号，这些论文被 Emmett Pugh 先生记录（我的专利代理人，有物理学背景），由 Pugh 先生转寄给美国专利局。

PROTOTYPE PROOF OF MY PATENT APPLICATIONS PENDING ON AN UNLIMITED SOURCE OF ENERGY.

原型证明我在申请中的关于无限能源的专利。

Attached with my Energy Patents Pending, there is a Scientific Document that I have written. Pages 6 through 12 of that Document state that gravity is the unobvious effects of electromagnetic energy and that matter is held together and attracts and repels other matter electromagnetically.

附加我的能源专利，有我写的科学文档。第 6 页到第 12 页说明重力是电磁能量不可见的效果，物质被电磁结合在一起，电磁产生吸引、排斥和其它现象。

Pages 12 through 21 explain electric charge, magnetism and electricity and in conjunction with my Energy Patent Applications explain and disclose how an Unlimited Source of Energy can be released from electromagnetic fields of force.

第 12 页到第 21 页解释电荷、磁性、电力和和能源专利应用的交互，解释揭露从力的电磁区域怎样释放无限的能量。

The Patent Examiners have recently turned down my Energy Patent Applications on the basis of wanting to see a working model.

专利审查人已经驳回我的能源专利，因为想看到工作模型。

The following disclosure demonstrates this working model:

下面的公开说明这工作模型：

It is presently stated in physics that it is virtually impossible to see any details of particles in suspension without an electron microscope.

当前物理学声称没有电子显微镜不可能看到悬浮粒子的任何细节。

It is also presently stated the only movement observable of particles suspended in water is in accordance with Brownian Movement which uses microscope of 500 to 1,000 times enlargement with drop of water on a slide, and any-movement observed is so slight, it is doubted by some observers.

同样声称悬浮在水中的粒子的可见运动符合布朗运动，用 500 到 1000 倍的显微镜的玻片上的一滴水，观察到的任何运动是如此微波，被一些观察者怀疑。

As a result of my many years of work and in accordance with my Energy Patent Applications Pending, I concluded the following:

作为许多年的工作结果和我申请中的能源专利一致，我总结如下：

I know the only way I was likely to easily and inexpensively get material movement as a result of interaction with the gyroscopic particles moving in electromagnetic fields of force was to get particles of minute size. Thereby, when the proper material minute particles were struck by the gyroscopic particles moving in an electromagnetic field they would have an electric current induced into them; which would create an expanding magnetic field and as a result of the combination of this effect coupled with the gyroscopic particles of the electromagnetic field moving at right angles to any resistive force they encounter the particles should have a pivoting action.

我知道唯一的方法，获取与电磁区域内运动的陀螺子交互的容易得到并廉价的运动材料，是得到极小的粒子。因此，因此，当适合材料极小微粒被电磁区域中运动的陀螺子撞击，它们将有一个感应电流；感应电流将创建一个扩展磁场，作为这种影响和电磁区域内陀螺子结合的结果，陀螺子垂直于任何阻力，它们将产生绕轴旋转的运动。

Accordingly, therefore, I did the following:

因此，我做如下工作：

I took several different metal materials and filed off small particles of each metal which I floated on water in different glass bowls for different metals.

我用不同的金属材料的极小微粒，不同金属微粒漂浮在不同玻璃碗的水上。

I observed that all the metal particles attracted each other and that they resulted in always forming a crystal structure on top of the water. I tried Silver, Gold, Aluminum, Bismuth, Iron, Brass, Copper, Zinc and Lead.

我观察到所有金属粒子相互吸引，在水上它们总是形成一种晶体结构。我试了银、金、铝、铁、黄铜、铜和铅。

I observed there were times when a magnet was rotated above any of the material some of the particles would become extremely magnetic and just as quickly lose this property. I also observed that when one end of the magnet was stuck in the water close to the metal particles floating, they would all shoot away from the magnet along the curved lines of force which was in a straight line from the center of the end of magnet and 360 ° around the end of the magnet. I also found this effect could be neutralized after 3 or 4 dunking of the magnet. But could be reinacted if the magnet was rotated above the particles again.

我观察到，当一个磁体在任何材料微粒上旋转时，一些微粒将有极强磁性并迅速失去这种属性。我同样观察到，当磁体一端放入水中接近漂浮的金属微粒时，它们都沿力的曲线从磁体迅速逃离，力线从磁体尾端直线发出并 360 °环绕磁体尾端。我同样发现这种效果在磁体浸入 3 或 4 次后会无效。但可以通过磁体在微粒上旋转控制。

These results gave me no doubt electromagnetic energy was being generated throughout the distilled water which is an extremely poor conducting medium. I, accordingly, took a flashlight with a magnifying glass for making a concentrated light beam and made the room dark. I found no obvious results with Gold, Silver, Copper, Zinc, Aluminum, Iron or Bismuth. However, with Brass and Lead I did find the results I had predicted in my Energy Patent Applications and Scientific Document!

这样的结果让我深信不疑，作为不导电介质的蒸馏水在产生电磁能量。因此，我用一具带放大镜的手电筒来聚集光束并使屋内变黑。我发现金、银、铜、锌、铝、铁或铋没有显示的效果。然而，黄铜和铅产生了在我能源专利和科学文档中预测的结果。

From the metals of Brass and Lead I observed streamers coming from the floating metal particles on top of the water. The streamers consisted of a web appearance dotted profusely with tiny metal microscopic particles or groups of atoms which came from the above floating metal.

从黄铜和铅金属，我观察到来自水上漂浮金属微粒的彩带。彩带由丰富的星罗棋布的网组成，网用微小的金属粒子或来处漂浮金属的原子团组成。

I concluded that these groups of metal atoms were pulled out of the floating larger metal particles because the total electrical attraction of the water molecules were greater than the total electrical attraction the metal atoms had for each other in the small floating metal particles. I verified this as fact by suspending a large piece of the metals of Brass and Lead; and this result was not observed, except when I put rough or sharp edges on the metals. (You will observe this result fits exactly as I predicted in pages 6 through 12 of the Scientific Document attached with the Energy Patent Applications).

我总结到，金属原子团是从漂浮大金属微粒吸出来的，因为水分子的总电磁吸引力大于每个漂浮小金属微粒原子的电磁吸引力。通过浸入一大片黄铜和铅的金属，我证明了这个事实；结果没有发生，除非我放入粗糙或有锋利边缘的金属。（你可以观察到这个结果，如我在能源专利附件科学文档第 6 到 12 页预测的那样。）

Of great scientific importance and scientific break-through is the observable fact that these minute metal particles attracted down into the water have an obvious energetic pivoting or flickering motion when observed by a flashlight beam. There are continuous convection currents also, but not near so exciting. This is exactly the results I had anticipated and built the prototype for! This also satisfied the exciting results I have predicted in my Energy Patent Application.

观察到的事实是有巨大科学价值和科学突破的，当通过手电筒观察时，这些水中极小金属微粒有明显的旋转或闪烁运动。有连续的电流对流，但没有如此让人兴奋。这和我预期的结果完全一样，并建造了原型机。这同样给我能源专利中预测一个满意的结果。

To be sure this effect was not caused by light, photo- electric effect, I set up the prototype in the dark and let sit for one hour and when I turned on the flashlight the particles were all already pivoting even when light was swung through test. Even when light is not directly on metal atoms they can be seen pivoting with same enthusiasm. The opposite was also done, the filings were put under bright light and then placed in water while under light and then put up close to light source and let sit for one hour under light and results were still the same.

为了确保这不是由光产生的，光电效应，我在黑暗中建立原型，放置一小时，当我打开手电筒时，微粒已经在旋转，即使光突然转向。即使光没有照到金属原子，它们依然剧烈旋转。相反的实验也做了，锉屑放到强光下，之后在光照下放入水中，之后接近光源放置一小时，结果相同。

Also knowing the mass of light is extremely hard to detect, in past sensitive experiments designed just for such purpose. And knowing the atoms of the test are extremely heavy (Mass) inertia effect compared to mass and lack of inertia displacement ability of light (a thin small light piece of tissue paper when suspended by a thread will not move when a strong light beam is shown on it). However, in extreme contrast, the Earth's electromagnetic field will quickly align my large 90 pound magnet even when suspended by a rope! Also the streamers are affected when a magnet is put up next to the glass bowl containing the test.

另外要知道光的质量是极难探测的，过去有灵敏的实验来做这事。同样要知道，实验中的原子是极重（大块）惯性效果，和缺少惯性的光比较（稀少的光当，用线挂起再用强光照时不会移动）(意思不通)。然而，极端的对比，当用线挂起时，地球的电磁场将迅速的对齐我 20 磅的大磁体。当一个磁体放到实验中玻璃杯上方，彩带也会受到影响。

To be sure this vigorous pivoting action of the minute metal particles was not a chemical reaction, I tested with litmus paper and, in addition, observed there was no noticeable difference in the appearance of the metal particles electroplated on the wall of the glass bowl.

为了确保极小金属微粒的这种有力的旋转运动不是化学反应，我用石蕊试纸测试，另外观察到与电镀到玻璃杯上的金属粒子在没有明显的不同。(没明的什么意思)

I also was impressed that when copper and zinc filings were put in same bowl, there was an electrolysis effect and floating particles had thick fungus-looking substance on the underside. However, absolutely no pivoting action could be seen of the particles in suspension.

我对铜和锌锉屑放入同样的杯中有深刻的印象，电解效应和漂浮粒子下面浓密的海绵状物质。然而，完全没有旋转运动。

Also lead is noted for its chemical resistance, even against sulfuric acid.

铅是明显不起化学反应的，即使放入到硫酸中。

Also impressive is the fact that when Copper and Zinc are heated to the point of combining their atoms to form Brass, the atoms of Copper and Zinc cannot be distinguished between. Which proves as I have predicted, atom alignment of a material is relative to gyroscopic particles moving in an electromagnetic field reacting with the material atoms and producing an electric current!

同样印象深刻的是，当铜和锌加热到融合成黄铜的温度，铜和锌的原子不能被区分开。这证明我的预测，材料的原子排列关系到和材料原子交互并产生电流的电磁区域中运动的陀螺子。

注：黄铜是由铜和锌所组成的合金。

Therefore, the results of this prototype prove the atoms of the metal suspended in the water are affected by the gyroscopic particles moving in the Earth's or any electromagnetic field of force as I have continuously predicted they would be in my 120 page Scientific Document and two Patent Applications on Unlimited Source of Energy from electromagnetic fields of force! This is also proved by the electrical field that exists in the water relative to the filings floating on the water which are repelled when a magnet is stuck in the water. These are also the results I was looking for and predicted before I ran this new scientific breakthrough prototype and was the exact reason I went to small filings in that I had hypothesized from my many years of work that I should get particles of minute size to easily and inexpensively see any obvious results from the effects of the continuous

energy of electromagnetic fields of force. This prototype has proven the exact results I explained in my Patent Applications.

因此，原型结果证明漂浮在水中的金属原子被地球的或任何电磁场中运动的陀螺子影响，如我已经连续预测，它们将在我的科学文档和两个来自电磁力的无限能源专利的 120 页。这被证明，通过存在水中的电场与当磁体浸入水中时漂浮在水中的锉屑被排斥相关。这个结果也是我在进行新科学突破原型之前寻找和预测的，我用小锉屑的准确原因是因为我已经根据我多年工作成果假设我应该极小的微粒来易容廉价看到任何可见来自电磁区域连续能量影响的结果。原型已经证明我在我专利中解释的精确的结果。

The prototype also indicates the following basic possibility law:

原型也指出下面基本的可能定律:

The maximum kinetic energy of each gyroscopic particle (due to its velocity) that is moving at C in the electromagnetic fields of force of the Earth or any source is independent of the intensity of the electromagnetic field of force. And, therefore, the pivoting action of the metal atoms in the test that are hit by the gyroscopic particles moving in an electromagnetic field are the result of the laws of a gyroscope moving at right angles to the force applied to it and in conjunction with the present laws of electromagnetic induction. The metal atoms consist of electromagnetic energy as does the electromagnetic fields of force and they react to one another when they collide, resulting in pivoting action of metal atoms in the prototype. The gyroscopic particle moving in the electromagnetic field attempts to spin the metal atom it strikes, which is resisted, therefore, results in the gyroscopic particle moving at right angles to this resistive force, which produces electric current in the metal particle, which also produces an expanding magnetic field which induces an electric current in neighboring metal particles and opposing magnetic field which causes pivoting, but when electric current in first metal particle is subsiding, its associated magnetic field then is collapsing and, thereby, induces electric current in opposite direction in neighboring metal particles which attract, thereby, causing pivoting back toward original position. This effect is taking place throughout the entire prototype and in addition is mirrored back and forth among the entire prototype resulting in a fantastically energetic pivoting action in all directions of the minute metal particles throughout the prototype.

每个陀螺子的最大动能（由速度决定），以 C 速度运动在地球或任何源的电磁场区域，是电磁场强度无关的。因此，实验中金属原子的旋转运动，由电磁场中运动的陀螺子撞击产生，是陀螺仪相对于施加力垂直运动规律结合法拉第电磁感应定律的结果。金属原子由电磁能量组成，当电磁区域与另一个碰撞导致原型里金属原子旋转。电磁区域中的陀螺了试图转动金属原子，它的撞击被抗拒，因此，导致陀螺子垂直于阻力运动，这在金属粒子中产生了电流，这也产生一个扩展磁场，磁场引起临近金属粒子产生电流，相反的磁场将引起旋转，但当第一个金属粒子里的电流平息，它相关的磁场将消失，因此，受到吸引的在临近金属粒子感应电流方向相反，因此引起向原来位置反向旋转。这效应发生在原型里整个过程，另外在整个原型里来回运动导致原型里所有极小金属粒子在所有方向有力旋转运动。

Another fact that proves electricity is being produced is that the entire inner wall of the glass bowl eventually becomes lightly and evenly electroplated with metal atoms after about 24 hours. (Even when distilled water is used.) Consider now Faraday's First Law of Electrolysis:

另一个事实证明电力被产生，在 24 小时后整个玻璃杯内壁最终被轻易均匀的用金属原子电镀。（即使用蒸馏水。）考虑法拉第电解定律:

The weight of any material deposited on the cathode during electrolysis is directly proportional to the quantity of electric charge passing through the circuit.

电解时负极析出的任何物质的重量会有等比例数量的电荷穿过电路。

This law states that the weight of a substance deposited is proportional to the quantity of electricity.

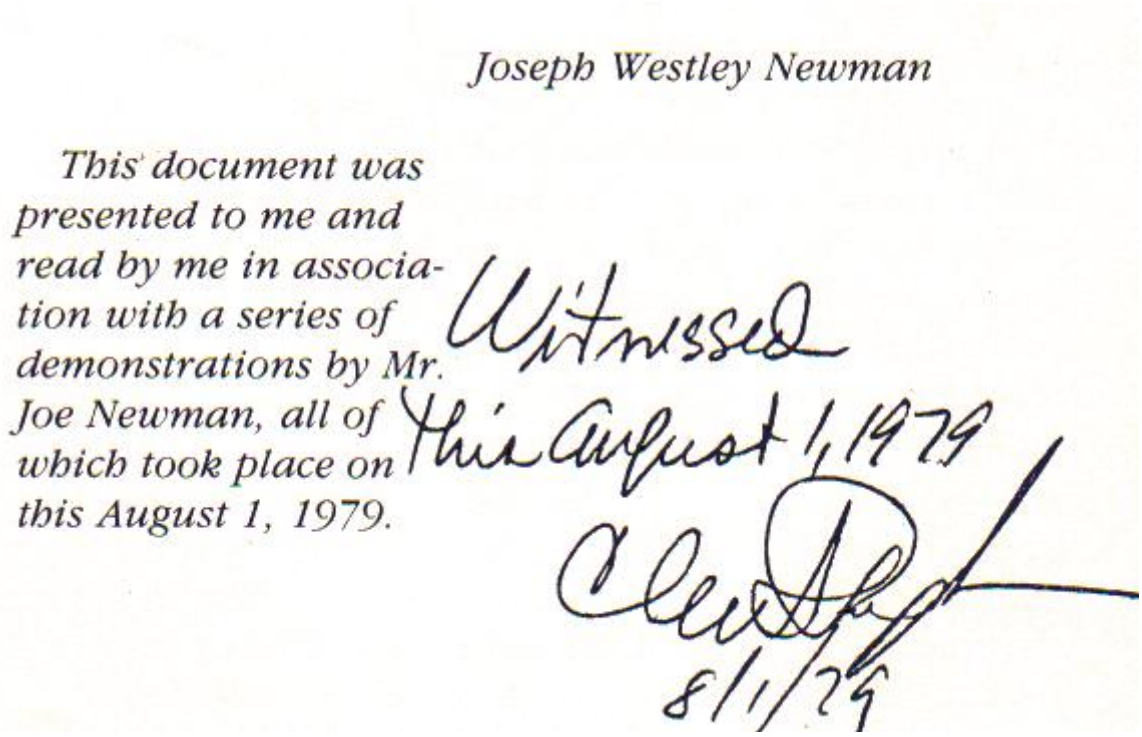
定律说明，析出的重量和电量成比例。

All of the above proves beyond any doubt I have disclosed a working prototype of my invention explained in my Energy Patent Applications and a Scientific Breakthrough that has never been disclosed and explained before on this earth.

所有上面事实证明，毋庸置疑，我已经公开了一个我发明的可以工作的原型，在我的专利和科学突破中有介绍，在地球上完全没有被公开过。

I have succeeded in disclosing a new invention which those skilled in the art by taking this, my Energy Patent Applications and attached Scientific Document will be able to make many obvious improvements upon. (Such as new type batteries, capacitor, etc., utilizing (Gravity) electrical fields and magnetic fields.) However, I am most certainly entitled to my first patent Claim and all other claims as I have shown a completely and totally new invention which will result in being the most beneficial invention ever put forth for this Earth before now! I have accomplished all of this with virtually no scientific equipment, it is obvious what can be now accomplished with proper financing and scientific equipment.

我已经成功公开了一个新的发明，可以通过这些来熟悉它，我的能源专利和科学文档附件做了许多明显的改善。(这样新型的电池、电容，等等，利用（重力）电场和磁场。）然而，我非常当然的做出我第一个专利声明，其它我展示的声明，如我已经展示一具完整新发明，将导致更多有益发明被提出！我已经完成所有这些，实际上没用科学设备，这明显可以用融资和科学装备达到。



第 15 章 气体的实现(能源机)

Chapter 15 THE GAS EMBODIMENT (ENERGY MACHINE)

My mechanical understanding of the "gyroscopic-action-entity" composition of all matter combined with my natural curiosity regarding the nature of electrical storms, led me to the development of the GAS EMBODIMENT for my Pioneering Invention.

我对组成所有物质的“陀螺效应实体”的力学理解结合我对电磁风暴自然现象的好奇心，导致了我能源机气体实现的出现。

The following facts concerning electrical storms stimulated my thoughts:

关于电磁风暴的下列事实刺激了我的思想：

(1) Jupiter possesses a strong magnetic field. Powerful, electrical disturbances occur within its atmosphere and intense bursts of radio waves are emitted from such disturbances.

(2) The Earth also possesses electrical storms, but of less intensity than those on Jupiter.

(3) I then asked myself: why the electrical -intensity difference between the two planets? I also observed that both the

gravitational (Unobvious Effects of Electromagnetic Energy consisting of gyroscopic particles) and magnetic fields of Jupiter are substantially greater than those on Earth. In addition, both the atmospheric composition and pressure of the two planets differ. I then concluded that the two planers' electrical storms differ in intensity and frequency as a result of differing Magnetic Fields, gases (atmospheres), gas pressures, temperatures (possibly), and rotational speeds.

（1）木星产生一个强磁场。强烈的电磁干扰在大气层中发生，每次干扰都发射强烈的无线电波。

（2）地球也产生电磁风暴，但强度小于木星。

（3）之后我问自己：为什么两上星球电磁强度有差别？我观察到木星重力（由陀螺子组成的电磁能量的不可见效应）和磁场区域都大于地球。另外，两个星球的大气成份和气压也不同。之后，我总结到两个星球的电磁风暴的强度和频率不同是不同磁场、气体（大气）、气压、温度（可能）和旋转速度造成的。

E. I then studied the known facts concerning Earth's electrical storms. Those faces which I found interesting include the following:

E.我之后学习了关于地球电磁风暴的已经事实。这些事实包含以下有趣的东西：

(1) Thunderstorms are the largest and most spectacular atmospheric electrical generators. The mechanism responsible for such electrical activity is very complicated.

(2) The motion of air across the Earth's Magnetic Field produces an Electric Field in the atmosphere (gases). Within the highly conducting regions of the lower ionosphere, this process is called the "dynamo effect" and it is responsible for larger electrical currents which are studied at the Earth's surface by means of the magnetic fields which such electrical currents produce. [However, within the lower atmosphere, the fields produced by the dynamo effect are several orders of magnitude less.]

(3) In drier climates, dust storms produce surface electrical fields much greater than the normal field and are characteristically oriented in the opposite direction from the normal field. (Other examples of this opposite-direction-effect are snowstorms and smoke/steam blown from locomotives.)

(4) All ions participate in random molecular motion. When an electric field is created in the atmosphere, the electric field superimposes (upon the random, atmospheric motion) a "drift velocity" in the field's direction when the ion charge is "positive," and opposite to the field's direction when the ion charges is "negative." The actual conduction currents flowing in the medium depend upon the established Electric Fields.

(5) It has been determined that updrafts and down drafts (high winds) in clouds and storms consist of separate electrical charges! By what I teach, this means that one draft consists of "negative" charges and the other draft consists of "positive" charges!

（1）大雷雨是最大的、惊人的大气发电机。这种电学行为的机制是非常复杂的。

（2）气体穿过地球磁场的运动在大气（气体）中产生了一个电场区域。在电离层的低部的高度导电区域，这种过程叫做“发电机效应”，这是大电流产生的原因，在地表人们用磁场产生这种电流。[然而，在大气层低层，发电机效应要小几个数量级。]

（3）在干燥的气候，沙尘暴产生地表电场区域远远大于正常区域产生的，典型地与正常区域方向相反。（另一个客中相反方向效应的例子是暴风雪和机车的烟/蒸气吹制。）

（4）所有离子做做自由分子运动。当一个电场在大气层中创建，“正”电荷离子会在电场方向产生“漂移速度”，“负”电荷离子方向相反。实际的电流依靠建立的电场在媒介中流动。

(5) 已经确认，在云层和风暴中上长和下降（急风）由分离的电荷组成! 通过我教授的，这意味着一个气流由“负”电荷组成另一个由“正”电荷组成!

One can understand why I was stimulated by Fact 28-E (5), since it coincides precisely with my explanation of the behavior of gyroscopic particles (in a magnetic field) which travel in opposite directions "like cars on one-way streets." Such mechanical behavior generates an effect which causes the outside observer to perceive a gyroscopic-action-entity as "negative"

at one instant and "positive" at another instant in time.

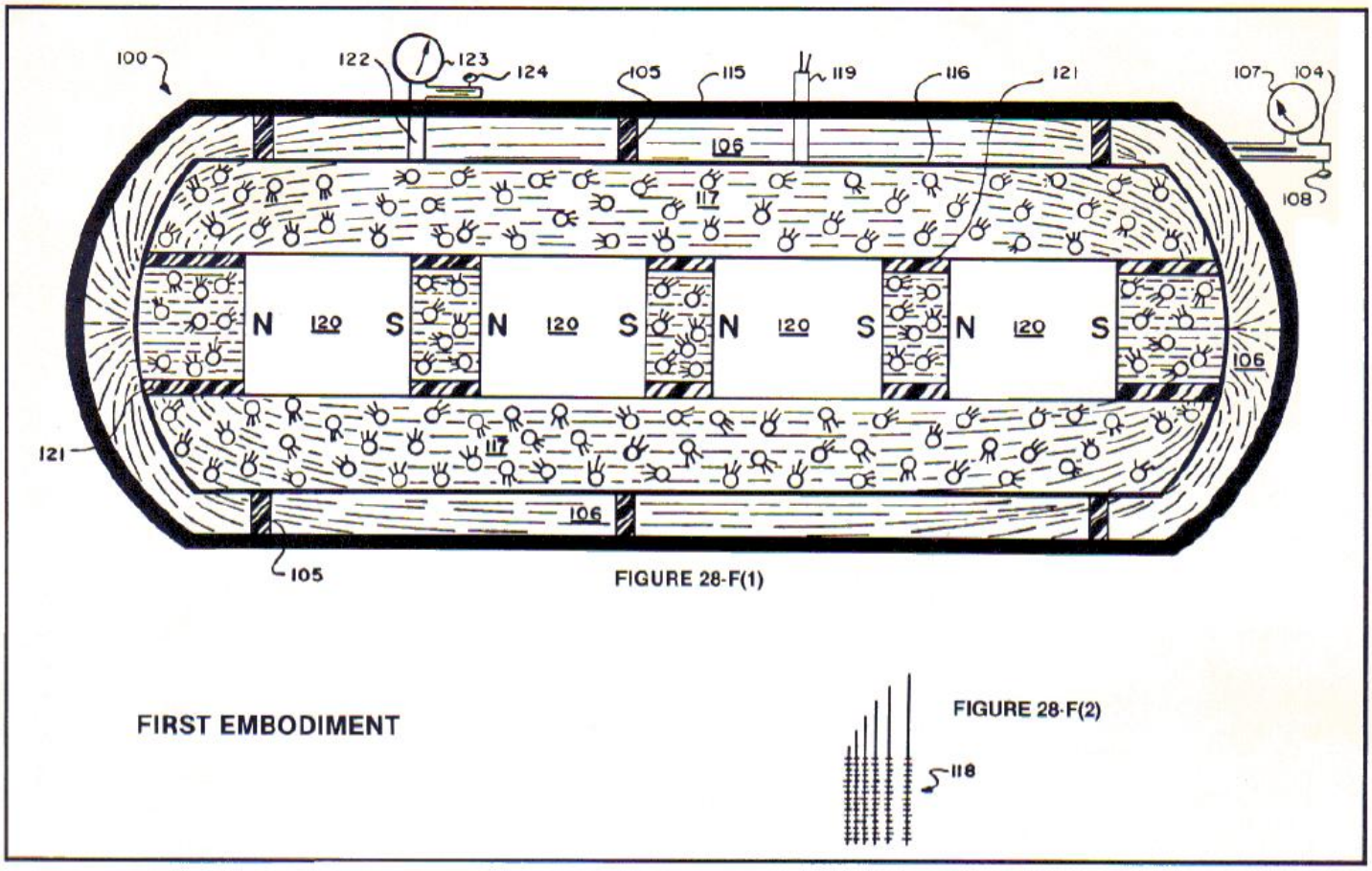
你能明白我为什么被 28-E (5)刺激到了，因为它和我解释的陀螺子（在磁场中）运动行为精确一致，陀螺子在相反方向运动“像汽车在单行道上”。这种力学行为产生一种效果，引起外部观察者在某一瞬间发现一个“负”陀螺效应实体，在另一瞬间发现一个“正”实体。

It was obvious to me that Fact 28-E (5) proved that the updrafts and downdrafts actually represented a circular motion. By placing electrically-sensitive instruments in the path of such activity, the circular motion would appear as "negative" or "positive" depending upon the frame of reference of the observer.

对我来说很显然，28-E (5)事实证明上长和下降实际一个循环运动的表现。通过放一个电表在这种运动的路径，循环运动将依赖于观察者参照系呈现“负”或“正”。

F. Combining the know ledge I had acquired, I applied for a Patent for the First (GAS) Embodiment of my Pioneering Invention in March, 1979. The following are drawings and instructions from my Patent Application 179-474 for my First Embodiment:

F．结合我的知识，在 1979 年三月，我为第一个我开创发明的（气体）实现申请一个专利。下面是绘图和说明，来自我的专利申请的 179-474 我第一个实现：



FIRST EMBODIMENT (Figure 28-F1)

One possible, exemplary embodiment using the principles of the system of the present invention is schematically shown in the generalized illustration of Figure 28-Fl.

一个用当前发明系统的原则可能的、典型的实现是图 28-Fl 整体示意展示的。

As illustrated in Figure 28-Fl, there is provided an electrical current generator 100 comprising an outer keeper housing 115 and an inner, pressure-containing, closed housing 116 supported therein by insulating supports 105. A vacuum exists in the area 106 between the two housings 115, 116, which vacuum is regulated and induced by means of the vacuum line 104 with its gauge 107 and its control valve 108. The outer housing 115 acts as a keeper for magnetic fields of force, and can be made, for example, of soft iron, while the vacuum in area 106 prevents the leakage or discharge of static electrical charges which might build up on the exterior of the inner housing 116.

如图 28-Fl 展示的，它提供一个发电机 100，由外壳 115、内部封闭压力室 116 和绝缘支撑 105 组成。在 115 和 116 室之间是真空区域 106，真空通过真空管 104 和测量仪 107、调节阀 108 调节和产生。外室 115 作为一个磁场区域的屏蔽器，可以用如软铁制作，真空区域 106 阻止静态电荷泄漏或放电，可能创建在内室 116 外部。

A gas or gas-liquid mix cure 117 which may also include solid particles such as, for example, lead or brass filings, is included within the inner housing 116 surrounding a series of aligned magnets 120 carried by insulating braces or supports 121 and producing a high, combined electromagnetic field. The magnets 120, which can for example be cryogenic magnets, have their "north" and "south" poles aligned (as illustrated by the "Ns" and "Ss") so that their magnetic fields reinforce one another.

117 中气体或气流混合体，也许包括固体微粒如铅或黄铜屑，在内室 116 中环绕串连的磁体 120，磁体由绝缘体 121 支撑，产生一个强电磁区域。磁体 120，磁体 120，可以是低温磁体，有它们的“南”和“北”极序列（如展示的"Ns" 和"Ss"），这样它们的磁场区域相互加强。

The level of the gas or gas-liquid mixture 117 in the housing 116 is regulated by means of the line 122 with its gauge 123 and control valve 124. Electric current output wires l19 are provided and extend down to electrically connect with a wire pick-up system 118 (shown in close-up in Figure 28-F2), which can be for example in the form of very small wires forming a closely-spaced network or mesh or of a porous conducting metal body or sheet, located in and extended throughout the fluid 117 in the housing 116.

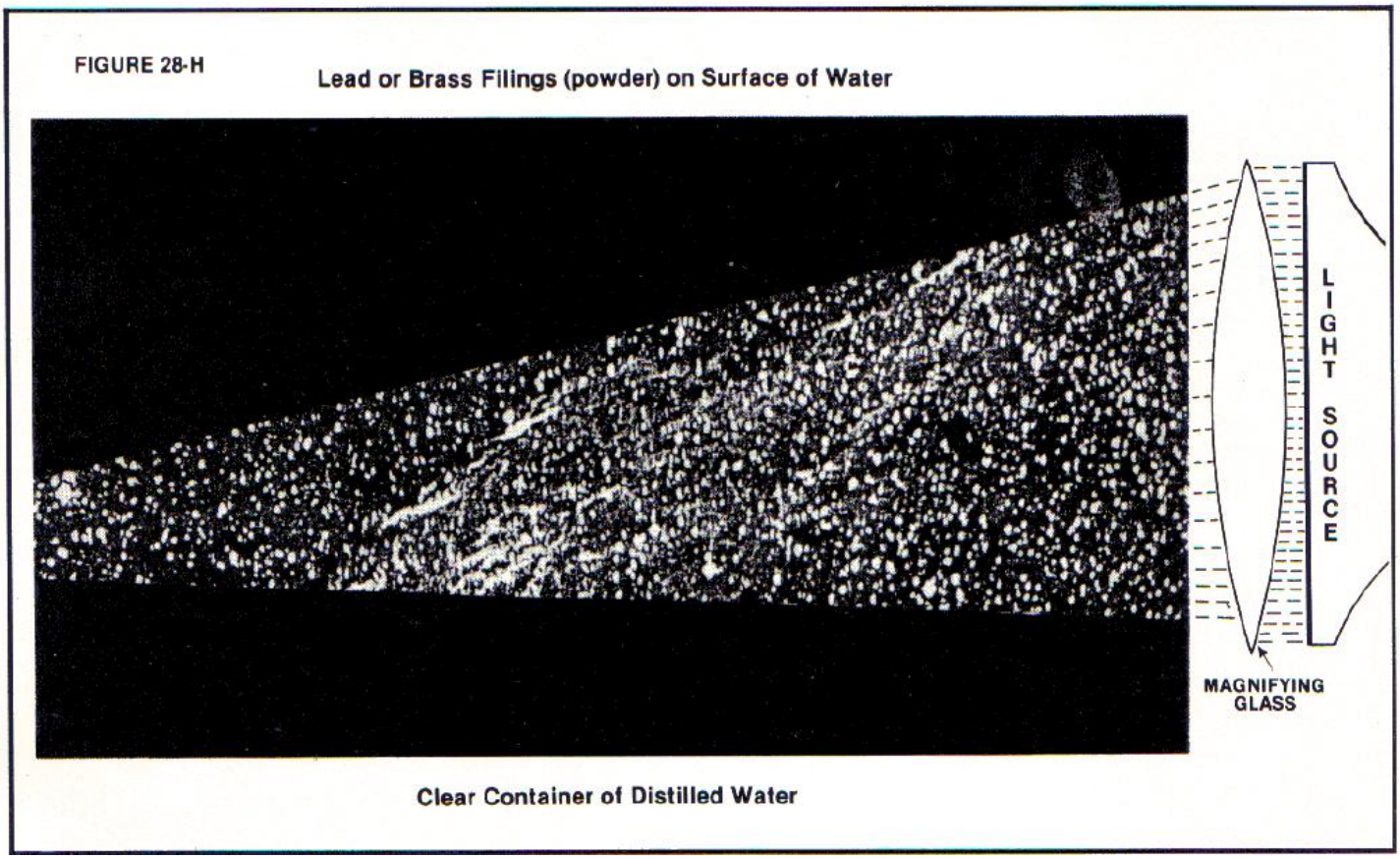
在 116 室里的气体或气液混合物 117 的数量由管 122 和它的测量仪 123、阀门 124 调节。电流输出导线 119 连接到一个提取系统 118（在图 28-F2 中特写镜头），例如，可以用细小的金属丝形成一个紧密的网或网状物或多孔的金属体，延伸到室 116 里的流体 117。

It is noted that a thimbleful of gas contains a fantastically large number of extremely tiny bodies which are in continuous, random motion moving at extremely high speeds. Hence, the fluid 117 continuously applies a force to the gyroscopic panicles (comprising the magnetic field as described in Chapter Three) moving at the speed of light in the high electromagnetic field (produced by the magnets 120) as they continuously collide with each other, which results in the fluid 117 becoming electrically charged. The charged fluid 117 discharges its electrical charge to the pick-up wire network 118 positioned in the fluid, and the electric current so produced and generated is taken off for use via the electrical output wires 119.

注意，极少量的气体有大量的极微小的体积，连续的以极高的速度做自由运动。因此，流体 117 连续的施加力给强电磁区域（由磁体 120 产生）中以光速运动的陀螺子（在第三章中组成磁场区域），它们连续相互撞击，导致流体 117 带电。带电流体 117 释放电荷到流体中拾取线网 118，电流就这样产生了，通过电能输出线 119 取出。

As an alternative to having internally-contained magnets 120, the electromagnetic field needed in the fluid 117 could be produced by a source located outside of the confines of the fluid 117 as long as a significant field was produced within the fluid 117.

作为可选的内部分磁体 120，流体 117 压需要的磁场区域可以通过位于流体外部的源产生，只要液体里产生一个电磁区域就可以。



G. The FIRST EMBODIMENT (discussed in Section 28-F) can be developed to produce significant results. The first step would be to construct a design (at least) 8 feet tall and 16 feet long which is capable of withstanding "high" and "low" pressures. One should utilize a strong magnetic field(s) and test a variety of pressures, materials, gases, fluids, etc. A monitoring or viewing area would be important to study the internal reactions. The height and length of the EMBODIMENT would permit observable and more distinct circulation of the medium.

G.第一个实现（在 28-F 部分讨论）可以发展产生一个重要的结果。第一步是构建一个设计，（至少）英尺高 16 英尺长，可以经受“高”和“低”压。应该用一个强磁场区域并测试各种气压、材料、气体、流体等。一个监测或观察区域对学习内部反应是非常重要的。实现的高和长允许观察明显的介质循环。

H. I now refer back to the lead powder demonstration discussed in Sections 28-A and 28-C. A demonstration conducted as I described will provide the exact results as seen in Figure 28-H. Observe the remarkable resemblance to astronomical photographs which depict those star systems enveloped within a gas (web appearance) undergoing stellar birth.

H. 我现在回到在 28-A 和 28-C 部分展示的铅粉。如我描述的展示将产生如图 28-H 看到的精确的结果。观察明显的相似天文学照片，描述恒星系统被气体包裹（网状外观）产生行星的图片。

FACT: Figure 28-H is in fact an astronomical photograph and yet this picture represents the exact formation and action one will witness when conducting the experiment described in Sections 28-A and 28-C!

事实：图 28-H 实现是天文学照片，这幅图展示精确的结构和运动，当进行 28-A 和 28-C 部分描述实验时可以观察到。

How unique it is that if we "open our minds" we can observe -in miniature on Earth -a process which produces a reflection of what possibly occurs on a much grander scale in the Universe. I find it very difficult to believe that such interesting results are "pure coincidence."

如果我们“打开思想”，我们交观察到-在地球的规模-一个过程是可能发生在更宏大规模宇宙的一种反映。我发现它难以置信的“完全一致”。

注：就是说地球发生的和宇宙发生的是一致的，都遵守相同的法则。

Actually, those who observe this test become enthralled, since it is like experiencing the feeling one enjoys upon viewing

the sky on a clear night.

实际上，实验的观察都会被迷住，因为它像经历观察晴朗夜空感觉。

If you, the reader, have Mastered what I have taught, then you should be inspired. You should also "peacefully and responsibly" recognize the significance of what you have Mastered. I would now recommend that you "prepare your mind for more."

如果你，读者，已经精通我所教授的，你应该受到了影响。你应该“平静并负责的”认识到我精通知识的重要性。我建议你“应该思考更多”。

第 16 章 引力

Chapter 16 GRAVITY

"If it should be said that the physical nature of gravitation has not yet been considered, but only the law of its action, and, therefore ,that no definition of gravity as a power has hitherto been necessary; that may be so with some, but then it must be high time to proceed a little further if we can ..."

- Michael Faraday

“重力的物理原理还没有被仔细考虑过，只有它运动的定律，因此，至今还没有需要对重力作一个定义；这也许在某些方面可以，但如果我们可以我们早该理深入一步了。”

-法拉第

By this point in the Book, the reader should recognize what gravity represents. As an introduction to what I will present, I wish to pay tribute to Isaac Newton and quote those words which demonstrate his mental clarity and profound insight:

通过这本书中的观点，读者应该认识到重力代表着什么。作为我将提出理论的介绍，我将引用牛顿的话证明他明确的思想和深远的眼光：

"It is inconceivable, that inanimate brute matter should, without the mediation of something else, which is not material, operate upon, and affect other matter without mutual contact . . . and is one reason, why I desired you would not ascribe innate gravity to me. That gravity should be innate, inherent, and essential to matter, so that one body may act upon another, at a distance through a vacuum without the mediation of anything else, by and through which their action and force may be conveyed from one to another, is to me so great an absurdity, that I believe no man who has in philosophical matters a competent faculty for thinking, can ever fall into it ..."

-ISAAC NEWTON

[from the PRINCIPIA , published by the University of California Press, Los Angeles, 1934, page 634 of the Appendix.]

“这是难以置信的，物质，中间没有别的介质，没有彼此的接触可以影响到其它物质...一个原因，为什么我希望你不要认为重力是天生固有的。重力是物质内在的、固有和基本的，因此一个物体可以影响到另一个，通过空间的距离而没有媒介，通过它可以将运动和力传导给另一个，这对我来说是如此的荒谬，我相信任何可以冷静思考的人都不会犯这样的错误...”

--牛顿

[来自《原理》，由 xxx 印制，1934 年，附录 634 页]

29. A. I will now demonstrate that Gravity -as you may already realize -represents the Unobvious Effects of Electromagnetic Energy.

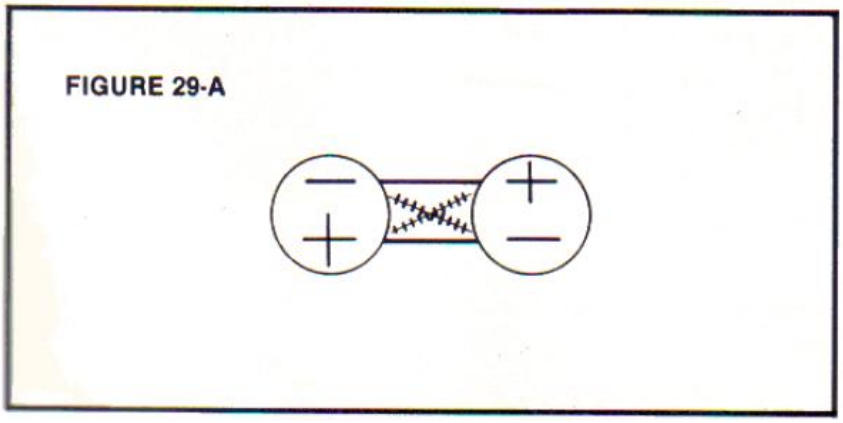
29. A. 我现在将展示，重力-你也许已经了解-代表电磁能量的不可见效果。

EXAMPLE: If a single "negative" and a single "positive" charge are physically separated from one another ⊖ ⊕, one could easily detect their existence as electrical charges. However, if the two separate charges are joined, then one would have a mass of ⊕ which neutralizes the Obvious electrical characteristics possessed by the charges when physically separated.

例子：如果一个“负”电荷和一个“正”电荷物理上相互分离⊖ ⊕，能轻易的探测到它们的存在。然而，如果两个分开的电荷结合在一起，将产生一个结合体 ⊕，中和了当物理分离产生的可见的电特性。

Visualize two, separate masses of ⊕ and ⊕. Neither mass would demonstrate Obvious electrical characteristics. But consider what occurs (with respect to the attracting and repelling forces of those two physically separate masses) when they are brought close to one another:

设想两个分离的结合体⊕ 和 ⊕。没有结合体显示可见电特性。但考虑当它们相互接近时发生了什么（关于两个分离结合体的吸引和排斥）：



In Figure 29-A, the positive charge within each mass attracts the negative charge and repels the positive charge of the other mass. In addition, the negative charge attracts the positive charge and repels the negative charge of the other mass.

在图 29-A，每个结合体中的正电荷吸引负电荷排斥另一个结合体里的正电荷。另外，负电荷吸引正电荷并排斥另一个结合体内的负电荷。

B. WRONG CONCLUSION from observing Figure 29-A: The attraction and repulsion forces of the two, separate masses are equal; therefore, they would neither attract nor repel.

B. 观察图 29-A 产生的错误的结论：两个分开结合体吸引和排斥力是相等的；因此，它们没有吸引和排斥。

C. RIGHT CONCLUSION: The unlike charges will seek to obtain the least possible distance between themselves with respect to the two, separate masses; and the Like charges will seek to obtain the greatest possible distance between themselves with respect to the two, separate masses. [Remember that the charges being simultaneously repelled are also being simultaneously attracted and such charges cannot physically move far from one another.]

C.正确的结论：相异电荷将寻找两个分离结合体之间最短距离；相同的电荷将寻找两个分离结合体之间最大距离。[记住电荷在被排斥同时也被吸引，这样电荷在物理上不能相互远离。]

Consider the implication of the Inverse-square Law with respect to the attracting or repelling force of charges. The most dominant forces are those between the charges existing within each separate mass. Consequently, the attraction force is greater than the repulsion force between the two separate masses -but (as an order of magnitude) this difference is unimaginably small. [A simple mathematical analogy demonstrates this "unimaginably small" difference: If we assign to equal attraction and repulsion forces a "unity of 1," then the difference (in the attracting forces being greater than the repulsion forces) would be an extremely small percentage of such "unity of 1," e.g., only .00001.]

考虑电荷吸引和排斥的平方反比定律的含义。主要的支配力在分开的结合体中电荷之间。因此，吸引力大于两个分开结合体间的排斥力-但（数量级上）这种差别达到难以置信的小。[一个简单的数学分析显示出这“难以置信的小”的差距：如果我假设相等的吸引和排斥力是一个“整体 1”，那么这种区别（在吸引力大于排斥力）将相差极小，如，

只有.00001。]

注：“整体 1”是将整体看成 1，别的都是一个小数，来说明小的比例。

Such a small difference is clearly demonstrated by the fact that the attraction force of Gravity (the observed effect of the interaction of unobserved electromagnetic fields comprising Matter) is extremely less than the ("unity of 1") attraction/repulsion forces of Obvious electrical charges as well as those same forces (gyroscopic-action-particles) which comprise magnetic fields or Matter itself.

这种小区别清楚的由下面事实说明，重力的吸引力（组成物质的不可见电磁区域交互的可见效果）远远小于（“整体 1”）可见电荷的吸引/排斥力，这些相同的力（陀螺子）组成磁场区域或物质自身。

D. I hypothesize that the following represents the Law of Gravity with respect to the Inverse-square Law: The difference in the Unequaling Forces (in accordance with the law of distances sought between "like" and "unlike" gyroscopic-action -particles) of the two, above-mentioned masses causes a Force of Gravity to be a very small percentage (example only: .0001 of a "unity of 1") of the equally attracting and repulsion forces having a "unity of 1." （Refer to Section 25-E.）

D. 我假定下面描述表示平方反比定律里的重力定律：关于上面提到的电荷结合体两个不均匀力（与“相同”和“不同”陀螺子相互定位法则一致）的不同，引起一个重力，“整体 1”中相等吸引和排斥力的一个非常小的百分比（如只有：“整体 1”的.0001）。（关于 25-E 部分）

Such equal forces (with a "unity of 1") represent a balance of a11 the "negative" and "positive" gyroscopic-action-particles comprising all Matter. [I remind the reader that such "negative" and "positive" gyroscopic-action-particles are actually composed of only one type of gyroscopic-action-entity which appears to move in opposite directions depending upon the frame of reference of the observer.]

这种相等的力（“整体 1”中）代表了组成所有物质的“负”和“正”陀螺子的平衡。[我提醒读者，这种“负”和“正”陀螺子实际是由一种陀螺效应实体组成，相对于观察者参考系在相反方向运动。]

As a result of such Unequaling Forces, the attraction force is always minutely greater than the repulsion force. Such an inequality of forces is still incredibly less than the attraction/repulsion forces of Obvious electric charges or magnetism which have a "unity (force) of 1."

这种不均匀的力的结果，吸引力总是比排斥力大一点。这种不均等的力比“统一体（力）1”的磁力或可见电荷的吸引/排斥力不可思议的小。

"As a result of such Unequaling Forces, the attraction force is always minutely greater than the repulsion force."

“这种不均匀的力的结果，吸引力总是比排斥力大一点。”

NOTE: For the convenience of expression, I am arbitrarily assigning this "unity (force) of 1" value to electric charges and magnetism in order to provide the reader with some subjective means to distinguish such forces from the very weak gravitational force which would have -as an order of magnitude -a value of approximately .0001 based upon the above forces having a value of "1."

注意：为了表达的方便，我随意假定电荷和磁力的“整体（力）1”值，为了读者对来自微小重力的这些力有一些自己的概念，重力-数量级上-基于上面“1”值的力值大约为.0001。

E. It should be clear that such Unequaling Forces occur regardless of mass size or number. This minute attraction force cannot be neutralized by placing uncharged or non-magnetic matter between the Earth and another object. If this were done, such matter would simply participate in the same "unequaling effect" between its own "negative-positive" (gyroscopic-action-particle) composition on Earth.

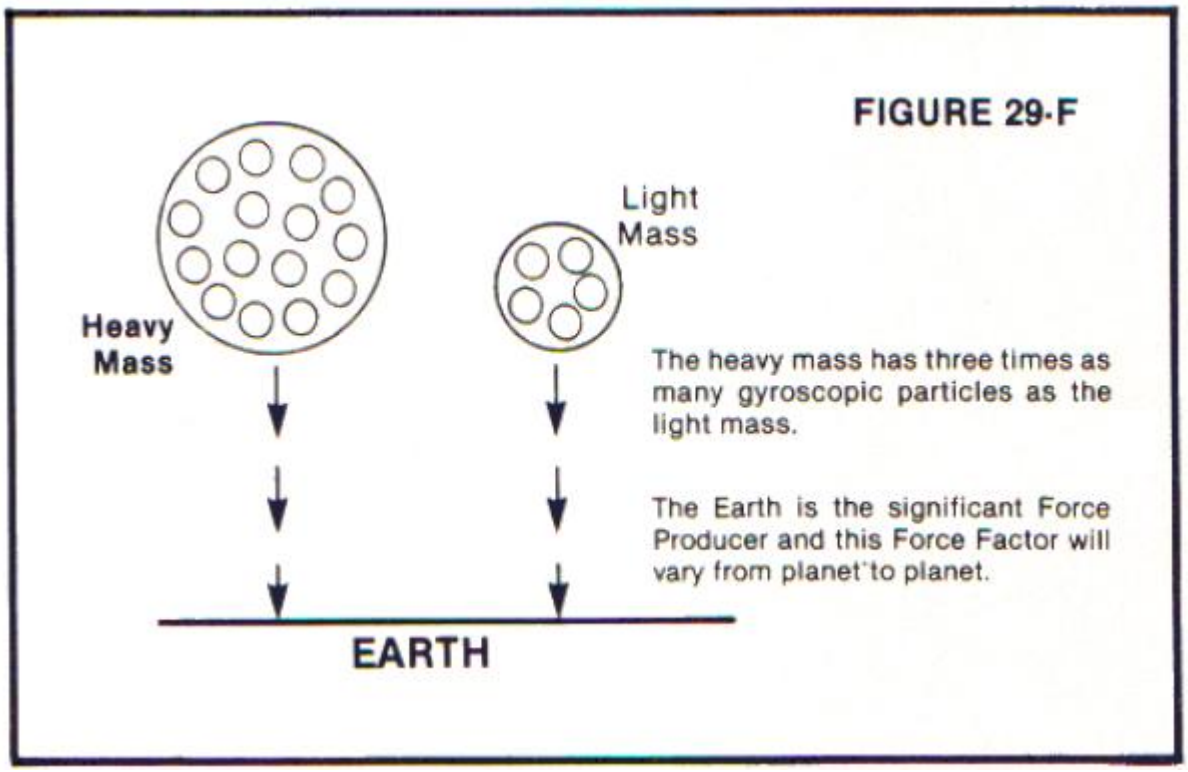
E. 很明显，不管结合体的大小和数量，这种不均匀的力总会发生。这种微小的力不能让地球和其它物体通过无电性或无磁性物质中和。如果这样做，这种特将简单的参加同样的“负正”（陀螺子）组件间的“不均匀效应”。

F. One may ask, "When they are both dropped from the same height, why doesn't a heavy mass fall faster than a light mass towards a significantly larger mass, e.g., the Earth?”

F. 你也许会问，“当它们从相同的高度抛出，向一个非常重的物体，如，地球，为什么重的没有比轻的快一点呢？”

ANSWER : Such masses fall at the same rate because the attraction force (due to the "unequaling effect" [Gravity]) will be only a small percentage of the "unity force of 1" (in effect between all gyroscopic-action panicles comprising all Matter) and will also be a constant for a particularly large mass such as the Earth. (See Figure 29-F.)

回答：这种物体在同样速率下坠，因为吸引力（产生于“不均匀效应”[重力]）将是“整体力 1”（实际上在组成所有物质的陀螺子之间）一个很小的百分比，因为一个特别大的物体如地球它将是一个常量。

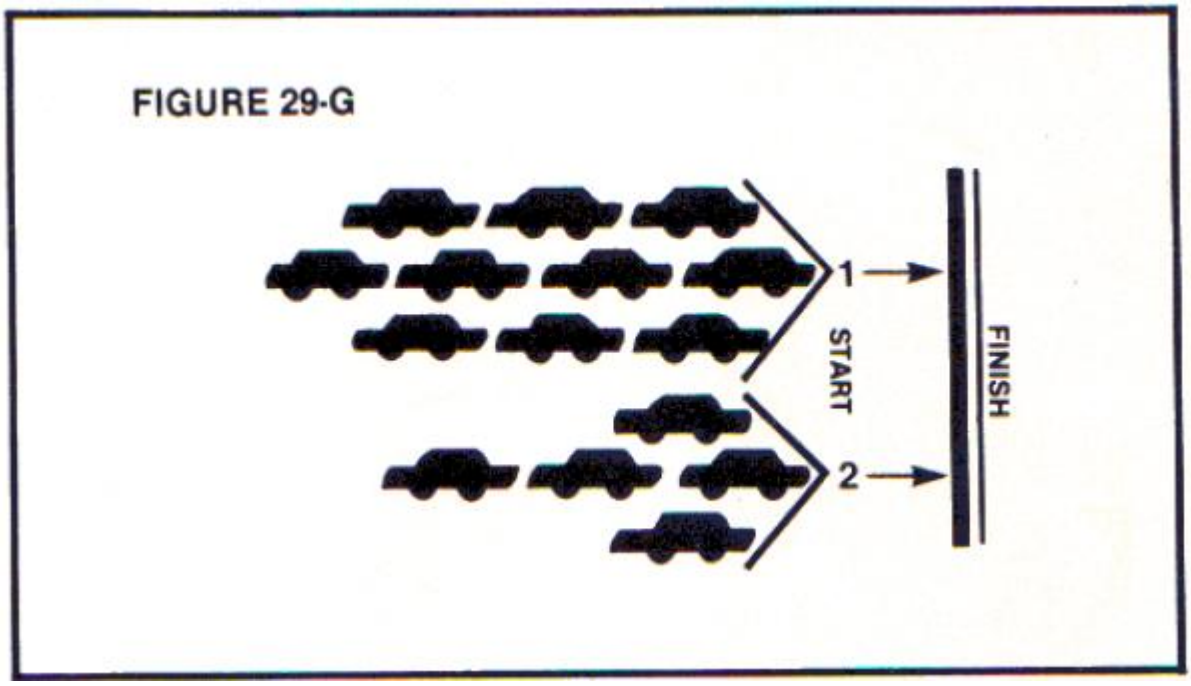


G. The (attraction) "Force Factor” (with a magnitude on the order of .0001 of the "unity of l" occurring between all "oppositely-charged" gyroscopic -action particles) demonstrates that the speed of an object (as a result of that "Force Factor") is independent of the number of gyroscopic-action-particles comprising that object. This is true because every gyroscopic-action entity comprising that object has the same small attraction "Force Factor " with respect to the Earth. As a result, the object cannot travel any faster (than the independent speed of its basic composition) towards the major "Force Producer,” e.g., the Earth.

G. （吸引）“耦合系数”（在量级上和“整体 1”的.0001 相似发生在所有“相反电荷”陀螺子之间）说明物体的速度（“耦合系数”的结果）和结成物体的陀螺子数量无关。这是正确的，因为每个组成物体的陀螺子相对于地球有相同小的吸引“耦合系数”。结果是，物体不能运动更快（比它基础组成独立速度）向主要“力产生者”，如地球。

EXAMPLE: Observe the following simple analogy:

例子：观察下面的简单分析：



In Figure 29-G, there are two auto drag strips labeled l and 2 , On drag strip 1, there are ten identical automobiles which can each achieve a speed of 100 mph in 14 mile. On drag strip 2, there are five automobiles identical to those on drag strip 1, and each automobile can achieve a speed of 100 mph in 14 mile. If all the automobiles on drag strips 1 and 2 start at the same instant, the front automobile in the 10-car group will reach the finish line at the same instant as the front automobile in the 5-car group.

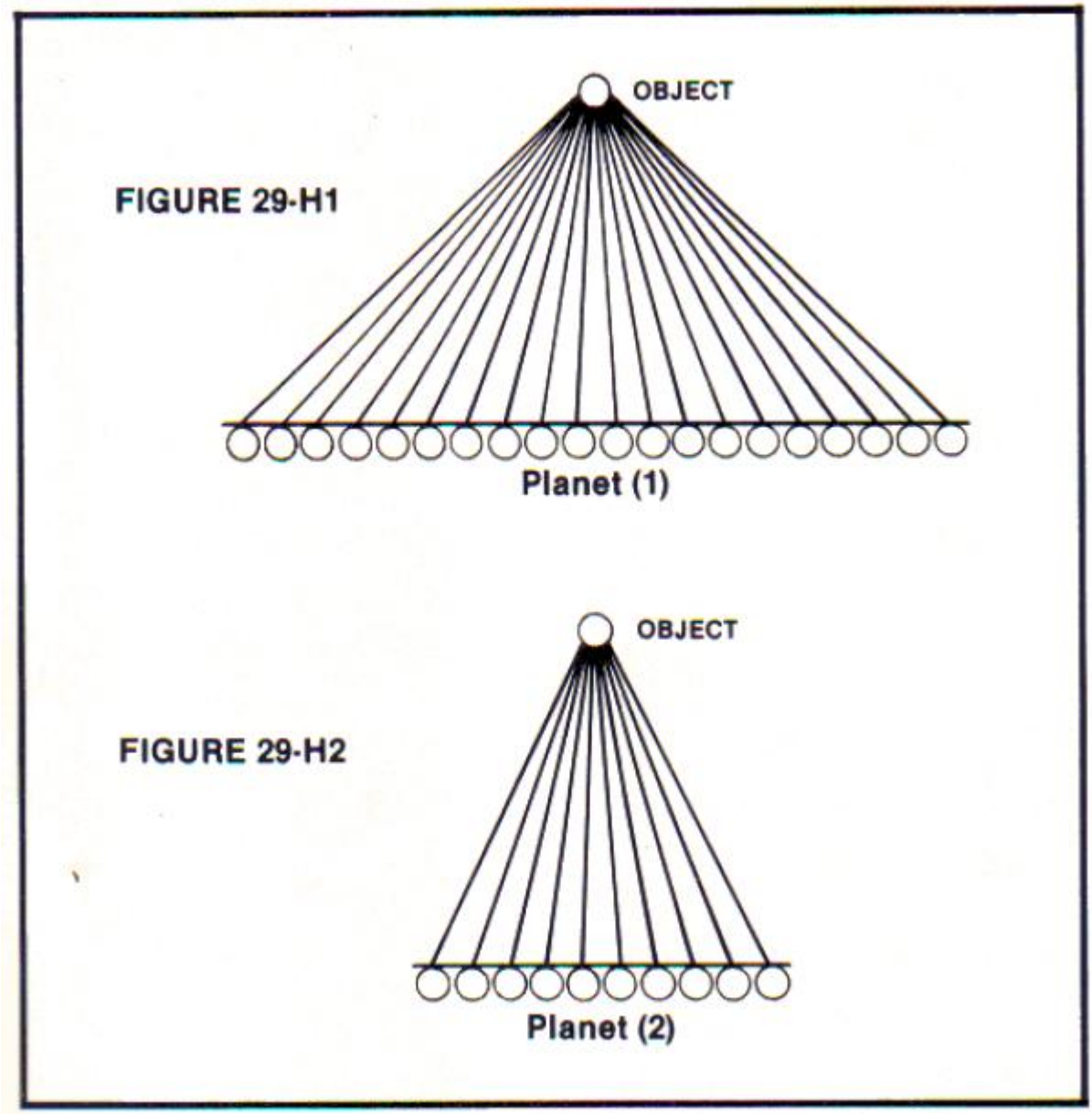
在图 29-G，两个汽车拖索标记为 1 和人，在拖索 1 上，有 10 辆汽车，每辆可以以 100mph 速度运动 14 英里。拖索 2 上，有 5 辆和 1 上完全一样的汽车，每辆可以以 100mph 速度运动 14 英里。如果拖索 1 和 2 上所有汽车在同一时间启动，10 汽车组和 5 汽车组前面的汽车将在同一时间达到终点。

However, if one attempted to stop both groups at the finish line, one would need to exert twice the force to stop the 10-car group as the 5-car group. (If the automobiles had twice the motor power, then they would travel twice as fast.) This simple analogy represents the same effect gravity has upon mass via the Unobvious effects of "unequal effects" between gyroscopic-entities comprising all Matter.

然而，如果试图在终线停止两组，停止 10 汽车组相对于 5 汽车组需要两倍的力。(如果汽车有两倍的电动机功率，它们将快两倍。）这个简单分析表示和重力同样的效果，物质的重力是组成所有物质陀螺实体的“不均匀效应”的不可见效果。

H. The difference in the Gravity Effect of various planers occurs for the same reason that -like the two groups of automobiles -such planets have different masses. (See Figure 29-Hl and 29-H2.)

H. 不同星球重力效果的不同原因是一样的，-像两组汽车-星球有不同的质量。(看图 29-Hl 和 29-H2)



If Planet 1 has twice the gravitational force of Planet 2, then Planet 1 is twice a "major force producer" than Planet 2. Falling objects on Planet 1 would equally respond in accordance with the "major -force-producer effect" (Gravity) of Planet 1. The same objects placed on Planet 2 would equally respond in accordance with the "major-force-producer effect" (Gravity) of Planet 2. However, the gravitational effect of Planet 2 would be half that of Planet 1.

如果星球 1 相对星球 2 有两倍的重力，那么星球 1 相比星球 2 是两倍的“主要力产生者”。星球 1 上的下落的物体将和星球 1 的“主要力产生者效应”（重力）一致。同样的物体在星球 2 将和星球 2 的“主要力产生者效应”（重力）一致。然而，星球 2 的重力效应是星球 1 的一半。

I. Prior to my work, Matter has been thought to be equally composed of "negative" and "positive" charges. The Facts I have presented demonstrate that this is not true and that Matter is composed of immeasurable numbers of "negative" and "positive" gyroscopic-action-particles. Moreover, the possible combinations (of such particles) are infinite, allowing Matter to vary in gyroscopic particle composition which can be predominately "negative" (gyroscopic particles) or "positive" (gyroscopic particles). As proof of these variances in "positive" and "negative" charges within Matter, see Figure 29-I:

I. 我之前的工作，物质已经被认为是由“负”和“正”电荷组成了。我展示的实事说明这是不正确的，物质是由无数“负”和“正”陀螺效应实体组成的。然而，可能的组合（这种粒子）是无穷的，允许物质可以变体陀螺子组合，可能由“负”（陀螺子）或“正”（陀螺子）主导。这些物质内“正”和“负”电荷变化的证据，看图 29-I:

ELECTROMOTIVE SERIES OF THE METALS 金属的电动序

Metal 金属	Electrode Potential(“Volts”) 电极电势（伏）

Lithium 锂	3.02
Potassium 钾	-2.92
Barium 钡	- 2.90
Sodium 钠	- 2.71
Aluminum 铝	- 1.67
Zinc 锌	- 0.76
Chromium 铬	- 0.71
Iron 铁	- 0.44
Nickel 镍	-0.25
Tin 锡	- 0. 14
Lead 铅	- 0.13
Hydrogen (arbitrarily set at zero volts reference) 氢	0.00
Bismuth 铋	+ 0.20
Copper 铜	+ 0.34
Silver 银	+ 0.80
Mercury 汞	+ 0.85
Gold 金	+ 1.68

(Conventional teachings depict these differences on an inefficient chemical basis. I teach these differences also exist on a more significant and powerful $E = MC^2$ basis.)

(传统教学基于无效率的化学描述这些的不同。我基于重要的有效率的 $E = MC^2$ 教授这些不同和存在。)

注：电动序是指金属在标准条件下（温度 298.15K、100 千帕，电极反应中各物质的活度为 1）的电极电势次序，即标准电极电势次序。

It is obvious that such variance in electrode potential can only occur as a result of different electromagnetic composition between the various substances. If all Matter was simply composed of an equal number of "negative" and "positive" gyroscopic particles, then such electrode potential differences could not exist. (Because such differences are so slight compared to the immense quantity of "negative" and "positive" gyroscopic particles, the differences are not Obvious in normal utilization of the substances.

很明显，电极电势这种变化是不同物质不同电磁组合的结果。如果所有物质只是简单由一定数量的“负”和“正”陀螺子组成，那么这种电极电势的不同不会存在。(因为这种不同和极大的量“负”和“正”陀螺子相比是如此微小，在正常利用材料时是不可见的。)

J. Another Proof of such variance in quantity of "negative " and "positive" gyroscopic particles can be observed by the conventional facts of present teachings:

J. 大量“负”和“正”陀螺子的这种变化的另一证据可以在现在传统教学中看到：

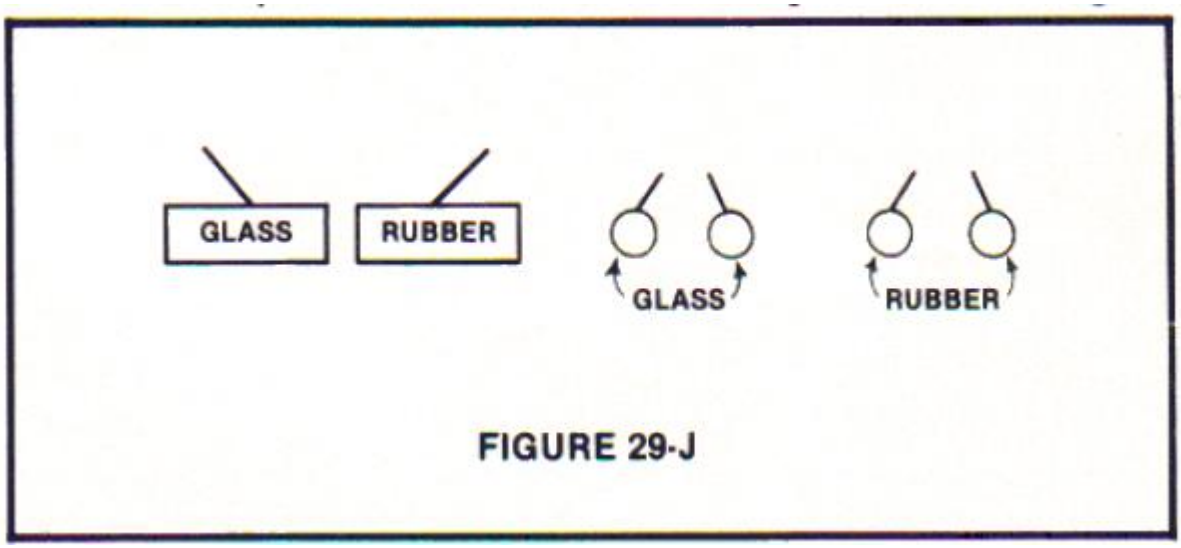


FIGURE 29-J

In observing Figure 29-J, it has been said that: "Rubber rods and glass rods can be made to have an electric charge by rubbing the rubber with fur or flannel and the glass with silk. Two electrified pieces of hard rubber rods will be found to repel each other as will two electrified glass rods; but an electrified hard rubber rod will attract to an electrified glass rod."

观察图 29-J，说明：“橡胶棒和玻璃棒可以通过摩擦带电，橡胶棒用皮毛或绒布，玻璃可以用丝绸。两个带电橡胶棒相互排斥，带电玻璃棒也是如此；但橡胶棒会吸引玻璃棒。”

The experiments depicted in Figure 29-J do not prove that different materials are composed of equal numbers of "negative " and "positive " charges (gyroscopic particles), but proves just the opposite. If the materials were equal in their "negative" and "positive" composition, then one would obtain equal results when the glass or rubber rods were rubbed; moreover , one would also obtain equal results when both glass or rubber were rubbed with silk or fur.

图 29-J 描述的实验没有证明不同的物质由相等数量的“负”和“正”电荷（陀螺子）组成，但证明了相反的一面。如果物质的“负”和“正”组成相等，那么摩擦的玻璃棒和橡胶棒应该一样；另外，用丝绸或毛皮摩擦玻璃棒或橡胶棒结果应该相同。

K. It is a known Fact that electrical charges (gyroscopic particles) will tend to place themselves as far from one another as possible, or they will distribute themselves in such a manner that their density per surface unit is everywhere equal.

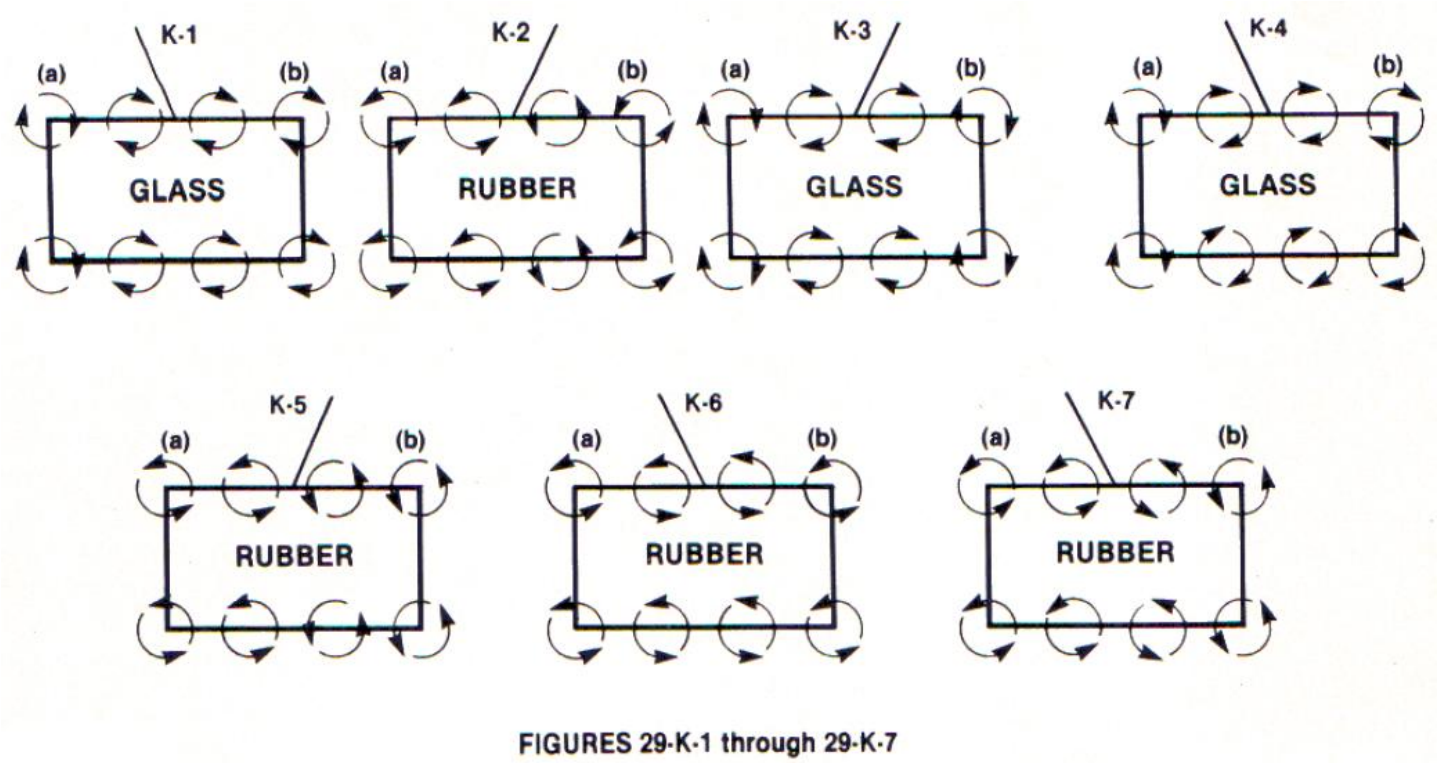
K.已经的事实是，电荷（陀螺子）相互间趋于尽可能远，或趋于在每个表面单位有相同的密度。

Let's examine what occurs when my teachings are applied to these observed results:

让我们检查一下把我教授的用到这些观察结果上发生了什么：

I teach that when one rubs the glass and rubber rods together (both are good electrical insulators) as in Figure 29-J, the "outer skin" surface of the material either loses or gains gyroscopic particles (electrical charge) demonstrating the "negative" and "positive" composition of all Matter. [Remember, all gyroscopic particles are identical. Those that are "negative" would - to an outside observer -appear to spin in a different direction from those that are "positive." But such "negative " and "positive" gyroscopic particles are rotated 180 ˚ with respect to one another.]

我要说的是，当一起摩擦橡胶棒和玻璃棒时（都是绝缘体）如图 29-J，材料的“外部皮肤”表面都失去或获取到陀螺子（电荷），代表物质组成的“负”和“正”。[记住，所有陀螺子是同样的。这些“负”粒子-对于外部观察者-相对于“正”粒子在不同方向自旋。但这种“负”和“正”陀螺子翻转 180 ˚ 将和另外一个一样。]



FIGURES 29-K-1 through 29-K-7

In Figures K-1 and K-2, the gyroscopic-action-particle spin on the glass rod is opposite to that on the rubber rod. One can see that the periphery interaction of the gyroscopic particles (spinning at the speed of light) on edge K-l(b) would easily "merge " (attract) with those periphery spins of the gyroscopic particles on edge K-2(a). [The same is true for edges K-2(b) and K-3(a).]

在图 K-1 和 K-2，玻璃的陀螺子自旋和橡胶棒是相反的。可以看到陀螺子边缘的交互（在光速自旋），K-l(b)边缘将很容易“融入”（吸引）K-2(a)边缘的陀螺子。[对 K-2(b) 和 K-3(a)边缘同样是正确的。]

Attraction would also occur if the glass rods were placed parallel to the rubber rods. However, by studying the above Figures, one should also observe how the edges of the two glass rods (or two rubber rods) placed end-to-end or side-to-side would repel one another, e.g., edge K-3(b) placed against edge K-4(a). Such repulsion occurs because the periphery spins of the gyroscopic particles on edges K-3(b) and K-4(a) are in the same direction. [The periphery attraction/repulsion of the gyroscopic particles occurs in the same manner as the periphery attraction/repulsion discussion in the Section on Magnetism (See Chapter Three).]

如果玻璃棒和橡胶棒平行将相互吸引。然而，通过学习上面的图，可以看到端对端或边对边放置的玻璃棒（或橡胶棒）的边缘相互排斥，例如，边 K-3(b)和边 K-4(a)想到排斥。这种排斥是因为边 K-3(b)和边 K-4(a)的陀螺子自旋方向相同。[陀螺子边缘的吸引/排斥与在磁力部分讨论的边缘吸引/排斥相同（看第三章）。]

In Figures K-5, K-6 and K-7, it should be apparent that the three rubber rods would repel one another since all their gyroscopic particles are spinning in the same direction causing all edges (and their respective gyroscopic particle peripheries) to repel one another.

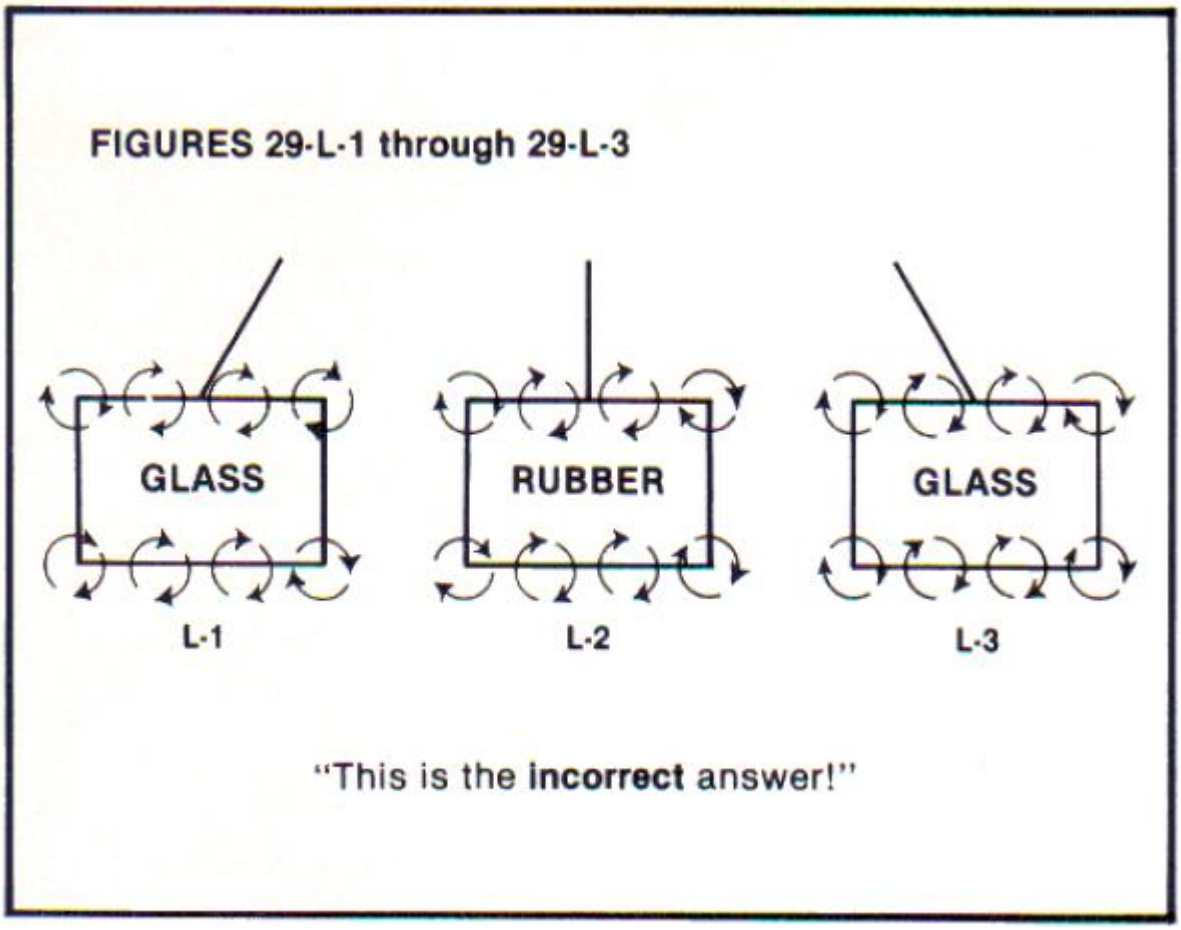
在图 K-5, K-6 和 K-7 中，显然，三个橡胶棒将相互排斥，因为在所有边缘（和陀螺子边缘）它们的陀螺子在同样方向自旋。

L. QUESTION: What would occur if the rubber rod in Figure K-2 was flipped over 180 ° ?

L. 问题：如果图 K-2 的橡胶棒翻转 180 ° 会发生什么?

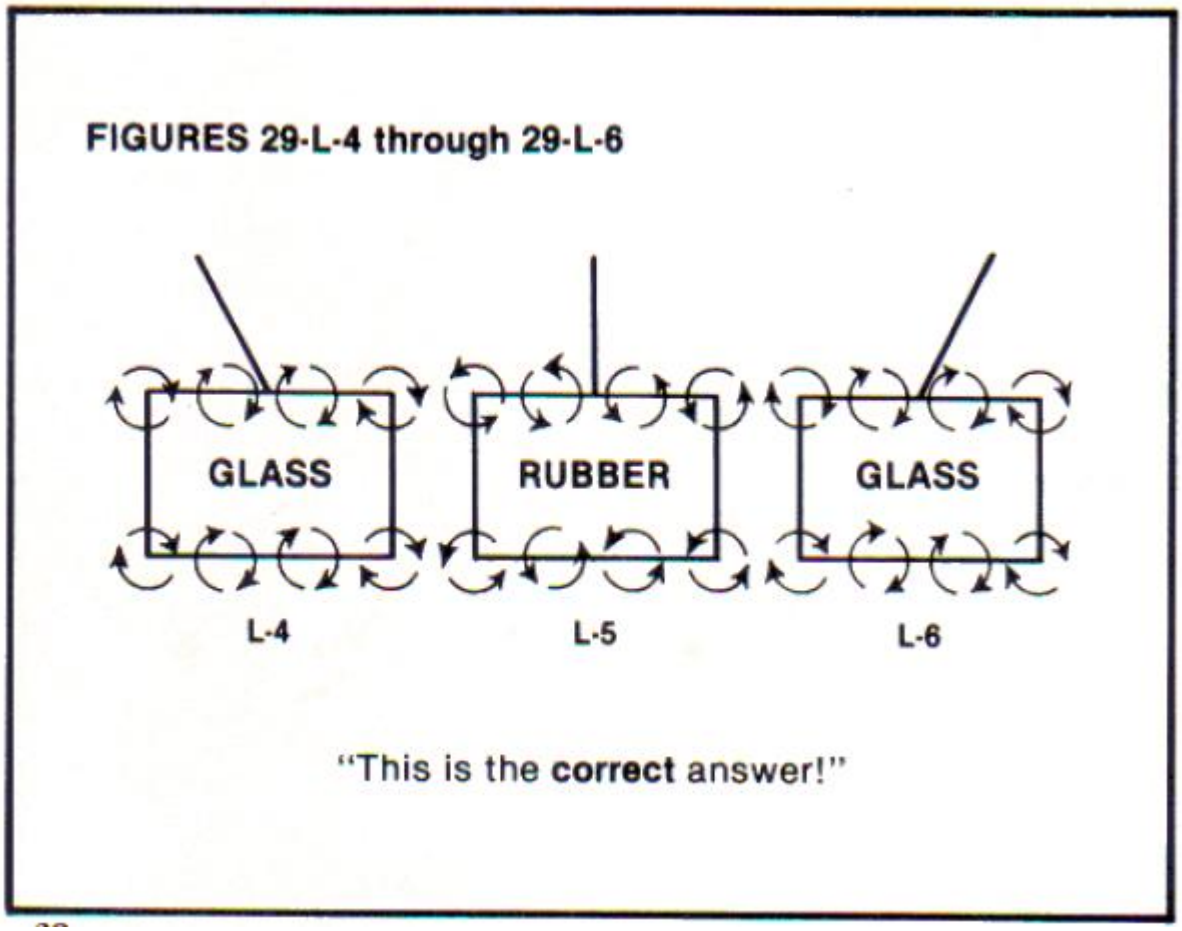
WRONG ANSWER: The rubber rod in Figure K-2 would now be repelled to the glass rods in above Figures K-1 and K-3 as the gyroscopic particles of the rubber rod would now be flipped over 180 ° to repel the glass rods as shown in Figures L-1, L-2 and L-3 as depicted on the following page.

错误的回答：图 K-2 橡胶棒将与图 K-1 和 K-3 的玻璃棒排斥，因为橡胶棒陀螺子将翻转 180 ° 排斥玻璃棒，如下图 L-1, L-2 和 L-3 中所示描绘的。



RIGHT ANSWER : It makes no difference if you flip over by 180 ° the rubber rod in Figure K-2. Regardless of how one flips or turns rubber rod K-2, one would still see the same spin direction for the gyroscopic particle (electrical charge) comprising rubber rod K-2. There would still be an attraction force between the glass and rubber rods regardless of their respective orientations. (See Figures L-4, L-5 and L-6.)

正确的回答：如果你将图 K-2 中的橡胶棒翻转 180 ° 将没有不同。不管怎么翻转呀旋转橡胶棒 K-2，看到的组成橡胶棒 K-2 的陀螺子（电荷）自旋方向依然相同。玻璃棒和橡胶棒之间的吸引是不受相对方向的影响的。（看图 L-4, L-5 和 L-6）



M. Once again I state my "humbling" feeling concerning the simple nature of this gyroscopic particle:

M.又一次，我声明我关于陀螺子简单原理“羞愧的”感觉：

"I SIT IN AWE UPON THE REALIZATION OF THIS INGENIOUS MECHANISM THAT IS SO SIMPLE THAT IT BEFUDDLES THE MIND."

“我惊叹于这种机制简单到让人迷惑不已。”

Magnetic and Electric Fields are indeed equal. They are one and the same!

磁场我电场实际上是相同的。它们是完全一样的!

The basic mechanism of nature is ingenious because all Matter is composed of one type of Gyroscopic Action-Particle. By traveling in varying directions, such particles create a force influence upon one another causing them to gyrate with respect to one another. As a result, this mechanical action and varying numbers of gyroscopic particles then create infinite types of Matter. The mathematical combinations (of such possible gyrations combined with the number of gyroscopic particles) are infinite.

自然的机制是精巧的，因为所有物质由一种陀螺效应子组成。通过在变化的方向上运动，这种粒子对其它粒子产生力的影响，使它们相对于其它粒子自旋。结果是，这种运动机制和陀螺子数量的变化产生了初始的物质。精确的组合（这种可能的自旋结合一定数量的陀螺子）是无限多的。

Such a view is consistent with all Matter in the Universe being composed of the same entity having an attraction (or repulsion) of "ONE" towards another. This mechanically explains the consistency between the mathematical laws of Magnetism, Electric Charge, and Gravity. My comprehension of this mechanism generates in me a most "humbling" experience, which I feel even to this day. I hope you, the reader, also experience this feeling.

这种观点与宇宙中所有物质由同样的相互吸引（或排斥的）相同实体组成。这种机制解释了磁力定律、电荷和重力的一致性。我对定种机制的理解来自于大量的经验，这至今这样认为。我希望你，读者，同样经历这样的感受。

I will now present additional Facts for your consideration and study.

我将展示额外的事实让你考虑和学习。

第 17 章 惯性

Chapter 17 INERTIA

"Why should gravitation, of all the many forces in nature, be the only one to be so intimately related to inertia, which is supposed to be an Inherent property of bodies that is Independent of the nature of the force being exerted?"

-Peter J. Brancazio

“为什么重力，在自然界众多力中，是唯一和惯性相关的力，被假定为物体的内部属性，和外部力无关？”

-Peter J. Brancazio

I will begin the subject of inertia with a quotation* from the exceptionally well-written book entitled The Nature of Physics by Peter J. Brancazio.

我将以引用 Peter J. Brancazio 写的非常好的 The Nature of Physics 中的一段来开始惯性的话题。

30. A. Quoting from pages 146 and 147:

30.A. 引自 146 和 147：

INERTIA AND GRAVITATION 惯性和重力

"One aspect of gravitation that may provide a clue as wits ultimate nature is the peculiar relationship between gravitation and inertia. This relationship is most pointedly illustrated when we re-examine in detail the derivation from Newtonian principles of the law of falling bodies. Newton derived the law by substituting the gravitational force between the earth and a falling body of mass m into the equation F = ma:

重力的一方面提供了一个线索，重力和惯性最终定理的一个奇怪的关系。这种关系是非常明显的，当我们重新详细检查牛顿关于下落物体定理时。牛顿导出定理是通过用等式 F = ma 替换地球和下落物体间重力，下落物质质量为 m。

$$F_{grav} = \frac{GM_E m}{R_E^2} = ma$$

"The next step is to cancel the m on both sides of the equation, with the result that the acceleration $a= GM_E/R_E^2$ is independent of the mass of the falling body. Herein lies the mystery.

下一步是消去等式两边的 m，结果是加速度为 $a= GM_E/R_E^2$，和下落物体的质量无关。此中有一个秘密的谎言。

"The m that appears in the equation F =ma is a measure of the inertia of the body. It measures the resistance of a body to any force. Let us call this the inertial mass. The m that appears in the equation $F = GMm/d^2$ determines the strength of a particular interaction involving the body- namely, the gravitational force. Let us call this the gravitational mass. The inertial and gravitational masses must be exactly equal; otherwise we could not cancel them in the above equation. If they did not cancel, we would arrive at the conclusion that the acceleration of a falling body does depend on its mass (either inertial or gravitational, or both), which is contrary to experience. The theory of gravitation would be incorrect.

F =ma 中的 m 是物体惯性的估量。它测量的是物质对任何力的抗性。让我们称它为惯性质量。$F = GMm/d^2$ 中的 m

决定一种特殊的物体参与的交互强度-称作重力。我们称它为引力质量。惯性质量和引力质量必须精确相等；否则我们不能在一个等式中消除它们。如果它们不能消除，我们会得到下落物体的加速度依赖于它的质量（惯性质量，或两者）的结论，这和我们的经验是相反的。引力理论将是不正确的。

"Therefore, we see that Newton did not really derive the law of falling bodies; rather, the law of falling bodies (an experimental result) forced him to assume that the inertial and gravitational masses must be equal.

因此，我们看到牛顿没有真正导出下落物体定律；相反，下落物质定律（一个经验结果）强迫它假定惯性质量和引力质量必须相等。

"The equality of the inertial and gravitational masses is extremely puzzling to physicists. Why should gravitation, of all the many forces in nature, be the only one to be so intimately related to inertia, which is supposed to be an inherent property of bodies that is independent of the nature of the force being exerted? This connection between inertia and gravity - two completely different and otherwise unrelated properties of bodies -has thus far eluded an explanation. In fact, Einstein looked on the equality of inertial and gravitational mass as a fundamental principle of nature and used it as a starting point for the general theory of relativity. This theory provided yet another conceptualization of gravity. Einstein's theory of gravitation is far too complex to summarize in a few sentences, so we will defer a discussion of it until a later chapter. In any case, the equality of the inertial and gravitational masses is clearly an important clue as to the fundamental nature of gravitation (and inertia as well). This equality must be explained by future physicists if a deeper comprehension of gravitation and inertia is to be achieved.

惯性质量和引力质量的相等极度困惑着物理学家。为什么重力，在自然界众多力中，是唯一和惯性相关的力，被假定为物体的内部属性，和外部力无关？惯性和引力的联系-两个物质完全无关的属性-至今没有一个解释。实际上，爱因斯坦看到了惯性质量和引力质量的相等性，以此为基础提出了广义相对论。这个理论提出了另一个引力的概念。爱因斯坦的引力理论复杂到不能总结为几句话，所以我们以后的章节再讨论。不管如何，惯性质量和引力质量的相等是引力（和惯性）理论基础的重要提示。如果要深入理解引力和惯性，这种相等必须被将来的物理学家解释。

"In view of the lack of a fundamental understanding of the nature of gravity, it seems remarkable that Newton's theory of gravitation could have brought about such an enormous advance in our understanding of the universe. But this is characteristic of the way in which science progresses. It is not necessary to understand gravity fully in order to have a successful theory of gravitation. Simply by accepting the concept of gravitation as an axiom, we can account for a wide variety of seemingly unrelated phenomena in relatively simple terms. Thus in view of its simplicity, comprehensiveness, and predictive power, the theory of gravitation must be considered an outstanding theory. The attempts on the part of some physicists to 'understand' gravity represent the next state in man's attempt to probe ever more deeply until the ultimate answers are found- if, in fact, such answers exist."

鉴于对引力理论缺少基础的理解，似乎牛顿的引力理论给我们对宇宙的理解带来很大进步。但这是科学过程的特点。为了一个成功的引力理论，不需要完全明白引力。简单的把引力的概念当作公理，我们可以用简单的术语说明种种看起来无关的现象。因此，鉴于它的简单性、综合性和预测性，引力理论必定会被认为是杰出的理论。一部分物理学家试图“理解”引力，表示人类试图探索更深入的最终答案-如果，实际上，这个答案是存在的。

B. I have already demonstrated that Gravity represents the "Unequalizing Effect" of the number of "negative" and "positive" gyroscopic particles comprising all Matter. [Again I stress that such "negative " and "positive" gyroscopic particles are in reality one type of gyroscopic particle which is depicted as "negative" or "positive" depending upon the particle 's given spin direction and the specific plane of that spin direction.]

B．我已经证明引力表示大量“负”和“正”组成物质的陀螺子的“不均衡效果”。[我再强调“负”和“正”陀螺子实际是一种陀螺子，描述为“负”或“正”依赖于陀螺子的特定自旋和自旋方向的平面。]

The dominating mechanical essence of the observations concerning the term "Gravity" of a planet (large bodies in space) upon other objects represents the Obvious "force factor effect." Such an effect is sometimes Unobvious. The mechanical effect of the term "weight" of an object is totally relative to the number of gyroscopic particles comprising that object, the Unequaling

Effect of its electrical charges, and the Unobvious "force field effect" of a particular gravitational field! Such a description is the same for gravity, except that gravity can be observed as either "Unobvious" or "Obvious."

关于于星球（太空中的大物体）对其它物体的“引力”的本质的观察表现出明显的“力效应”。这种效应在有些时候是不可见的。物体“重量”的力学效果是完全是组成物体的陀螺子、不均衡电荷和特定引力场的不可见“力效果”的结合。这种描述对重力也是一样的，此外策略可以是“不可见”或“可见”的。

C. I will now demonstrate that the "Inertia" of a mass is also mechanically related to the quantity of gyroscopic-action-particles comprising that mass. Inertia is simply the Unobvious, mechanical effects of the "speed" of the gyroscopic action of the basic building entity of all matter: the Gyroscopic Particle!

C.我现在将证明物质的“惯性”和组成物质的陀螺子数量也是相关的。惯性是简单的组成所有物质的基本实体-陀螺子-的陀螺运动“速度”的不可见力学效果。

Consequently, one can easily mechanically understand why inertia and gravitational masses are equal.

因此，可以很容易理解为什么惯性质量和引力质量是相等的。

They both represent one and the same gyroscopic- action-entity (see Section 30-A) which demonstrates the mathematical "oneness" of the two effects.

两者代表了同样的陀螺实体（看 30-A 部分），证明了两者效果的数学上的“唯一性”。

The following quote is a tribute to Michael Faraday:

下面的引用是一个对法拉第的称赞:

"Faraday, in his last years, tried to show experimentally a relation between gravity and electricity, concluding his paper with, 'Here end my trials for the present. The results are negative; they do not shake my strong feeling of the existence of a relation between gravity and electricity, though they give no proof that it exists. '"

“法拉第，在他最后的几年，试图用实验展示重力和电的关系，他总结到，‘现在我终止了尝试。结果是不好的；但它们没有让我动摇重力和电存在关系的强烈感觉，虽然它们没有证明它的存在。’”

D. To understand the relation between gravitation and inertia, one must first have the proper mental perspective. The effect of inertia is extremely small. Therefore, the mechanical essence of inertia can be very deceptive.

D.为了理解重力和惯性的关系，必须先有独特的洞察力。惯性的效果是极小的。因此，惯性的力学本质是非常令人迷惑的。

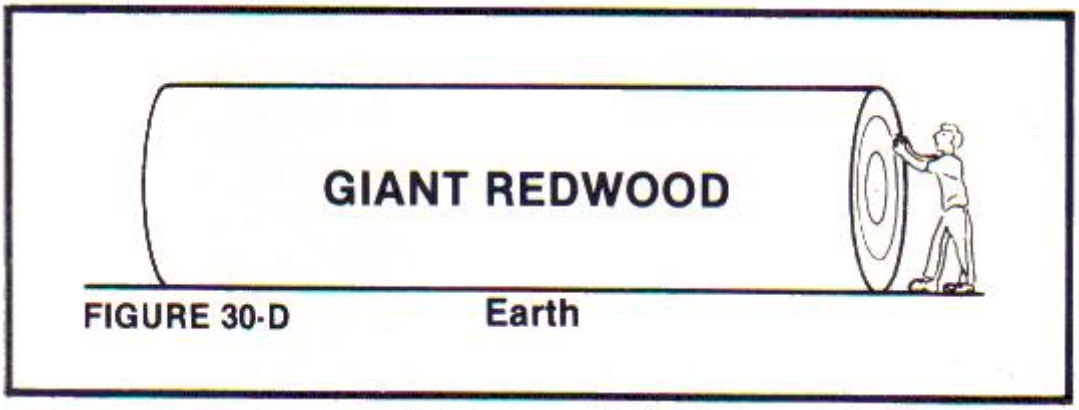


FIGURE 30-D

Imagine a massive log lying on the Earth's surface. As one attempts to lift even the log's end (see Figure 30-D), one would encounter great resistance due to the "gravity effect." (This effect was originally explained in Section 29-H.)

想象一个很重的原木放在地表。当一个人试图抬起原木的一端时（看图 30-D），将要克服“策略效应”导致的阻力。(这种效果在 29-H 部分开始解释。)

E. Have the same massive log suspended by a cable and attached to a support which permits the massive log to balance in the air. (See ,Figure 30-E.)

E.用缆绳将同样的原木悬挂起来，使原木在空中平衡。(看图 30-E)

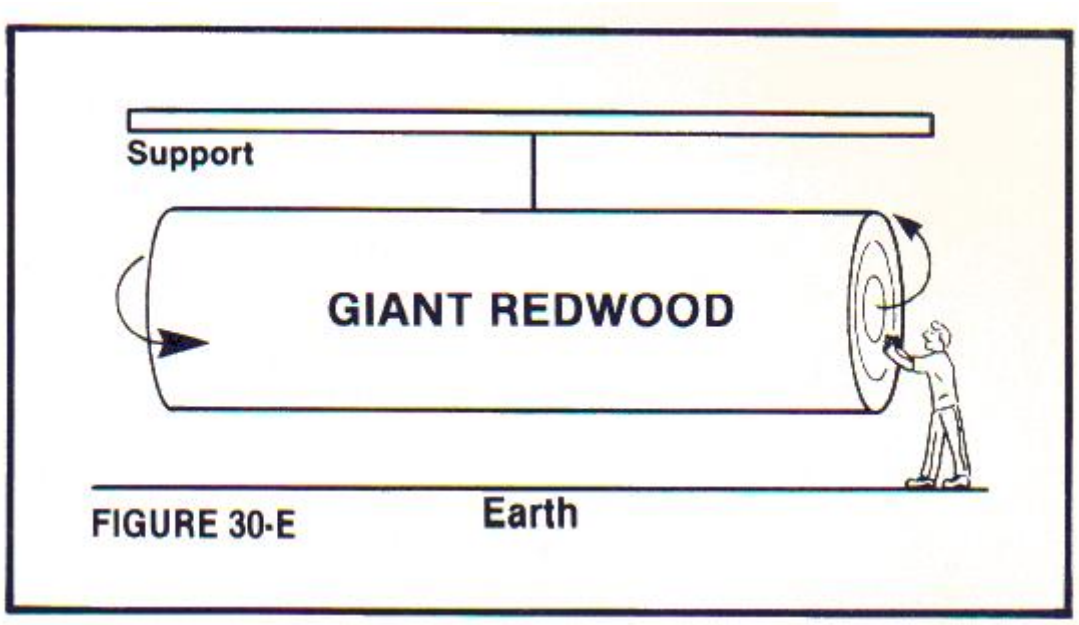


FIGURE 30-E

In this example, one has mechanically produced an "Unobvious Force" which does not in any way cancel the "gravity effect," but has simply "counter equaled" the "gravity effect" with respect to the massive log. In Figure 30-E, one will now find it relatively easy to move the massive log parallel to the Earth's surface, e.g., swinging end 2 around 180 °

在这个例子中，产生一个“不可见的力”，并没有抵消“重力效应”，只是简单和原木的“重力效应”“大小相等”。在图 30-E 中，发现要吧很容易移动和地面平行的原木，如旋转两端 180 °。

F. One can easily see that Figure 30-E demonstrates two points:

F.可以很容易看出，图 30-E 证明了两点：

(1) Even when the "gravity effect" was counter-equaled, there remained some type of resistance (Unobvious) force to the movement of that mass. This resistance (Unobvious) force is called "inertia."

(2) The Facts show that such "inertia" -as a resistive (Unobvious) force -is extremely weak compared to electric or magnetic forces which have a "unity factor of 1."

（1）即使当“重力”被抵消，移动物体依然有几种阻力（不可见）。这种（不可见）阻力叫做“惯性”。

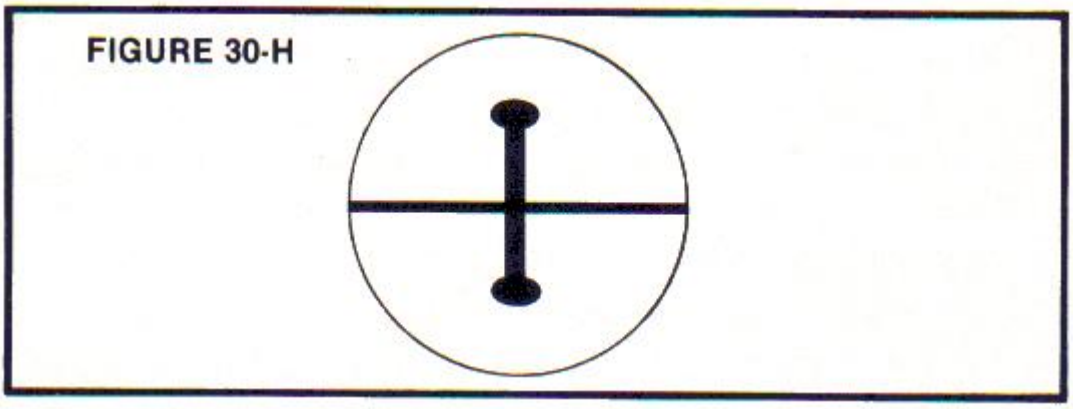
（2）事实说明，这种“惯性”-作为一种（不可见）的阻力-和“整体 1”的电场力或磁场力相比是极弱的。

G. One can conclude that this weak, "inertia-mass effect" is only some percentage of the "unity factor of 1" and similar to the weak "gravity-mass effect."

G.可以总结出，这种弱小的“惯性质量效应”是只“整体 1”的几个百分点，类似于弱小的“重力效应”

CONSIDER THE FOLLOWING: Einstein's General Theory of Relativity has been criticized for its failure to explain the concept of inertia. In Newtonian mechanics, it is stated as a fundamental principle that bodies possess inertia, but it is not explained why bodies possess this property.

考虑下面：爱因斯坦的广义相对论因为为能解释惯性被人指责。在牛顿力学中，惯性是物体拥有的基础原则，但没解释为什么物体有这种属性。



H. Consider the following experiment: a two-foot diameter, fiberglass ball has a 10-pound, one-foot diameter gyroscope hidden inside (see Figure 30-H) which has been rotated to 30,000 RPM (perfectly balanced). An uneducated man walks up to the ball and starts rolling it. As long as he rolls the ball in a direction that does not change the plane of axis of the internal gyroscope, the ball will roll relatively easily. However, when he tries to roll the ball in a direction which applies a force which attempts to tilt the axis of the internal gyroscope, the uneducated man would be dumbfounded since the ball would then resist him with great force. The ball would start gyrating in a rotational motion at right angles to the direction he pushed the ball. The ball would greatly resist his efforts to accelerate or reverse that rotational gyration. If, at a later time, someone informed him about the inertia of an object, he would comment, "I know of an object that has a 'varying inertia. "' In essence, the mechanical cause for the difference in observed results is caused by the "speed" of the internal mass!

H.考虑下面的实验：一个两英尺直径玻璃纤维球重 10 磅，一英尺直径的陀螺仪放在里面（看图 30-H），转速 30000 转每分钟（完美平衡）。一个没上过学的人来到球前开始旋转它。只要他在不改变内部陀螺仪轴面的方向旋转，球将相对容易旋转。然而，当他试图在倾斜内部陀螺仪轴的方向旋转时，他将会吃惊于球产生很大的力阻止他。球将开始在相对于他推球的方向直角方向旋转运动。球将阻止他对陀螺仪加速或反转。如果，后来，他了解了物质的惯性，他说，“我知道一个物体有一个‘变化的惯性’”。本质上，不同的力学观察结果是由惯性质量的“速度”引起的!

I. Because matter is principally equal in its "negative" and "positive" mechanical composition, i.e., it consists of the same, gyroscopic-action-entity spinning in opposite direction s, one may at first be deceived and conclude the following:

I.因为物质在“负”和“正”力学组成上大体相等，也就是说，由相同的旋转方向相反的陀螺实体组成，一个人也说第一次被误导并总结如下：

WRONG CONCLUSION: Matter is principally "negative" and "positive" in its composition and therefore there would be a "cancellation effect" with respect to a pivoting motion when an (Obvious) force tilted their respective axes. Therefore, the gyroscopic-action entity cannot be the cause of the "inertia effect."

错误的结论：物质的组成主要是“负”和“正”，因此当一个（可见）力倾斜它们各自的轴时，相对于旋转运动，将有一个“抵消效应”。

J. Let's examine the CORRECT CONCLUSION:

J.让我们检查正确的结论：

Consider the fact that (Obvious) Force = Inertia Mass X Acceleration. "The m that appears in the equation F = ma is a measure of the inertia of the body. " (See Section 30-A.) Therefore, in reality, the inertia effect is relative to the "speed" of the mass. If the mass has no speed then it can have no acceleration. During acceleration the mass simply has varying speeds.

考虑事实（可见）力=惯性质量*加速度。“方程式 F = ma 中的 m 是物体惯性的度量”（看图 30-A）。因此，实际上，惯性效果关系到物质的“速度”。如果物质没有速度，那么它没有加速度。在加速过程中物质有变化的速度。

Hence, one can conclude from the facts that any mass having speed also has inertia.

因此，可以总结出事实，任何有速度的物体也有惯性。

K. If one simultaneously shoots a bullet and drops another bullet (of equal mass to the first bullet) from the same position, they will both collide with the Earth's surface at the same instant. (See Figure 30-K.) WRONG CONCLUSION: Because the gravity effect (Obvious Force) caused the two bullets with equal masses to simultaneously collide with the Earth's surface, it can be concluded that the inertia effect of the two bullet-masses did not change at any time.

K.如果一个人在同一位置同时射出一个子弹和抛出别一个子弹（和第一个子弹质量相同），它们将在同一瞬间碰到地面。（看图 30-K）这是错误的结论:因为重力效果（可见力）引起两个同质量的子弹同时碰到地面，这可以总结为两个子弹的惯性效果从来就没变过。

L. Consider the following experiment which will demonstrate why the above conclusion is wrong:

L.考虑下面的实验，证明为什么上面的结论是错误的：

Construct a configuration as depicted in below in Figure 30-L. Place two bullet "traps" equidistant from the end of the gun barrel. With the assistance of an electric eye (which can react fast enough) and an appropriate mechanical device, the two traveling bullets would be simultaneously deflected at a right angle to their respective trajectories into traps 3 or 4. In addition, a pressure gauge could be connected to the mechanical device employed to deflect the bullets into the two traps. The purpose of the gauge is to measure the exact (Obvious) "opposing" force required to deflect the two bullets of equal masses into the two traps.

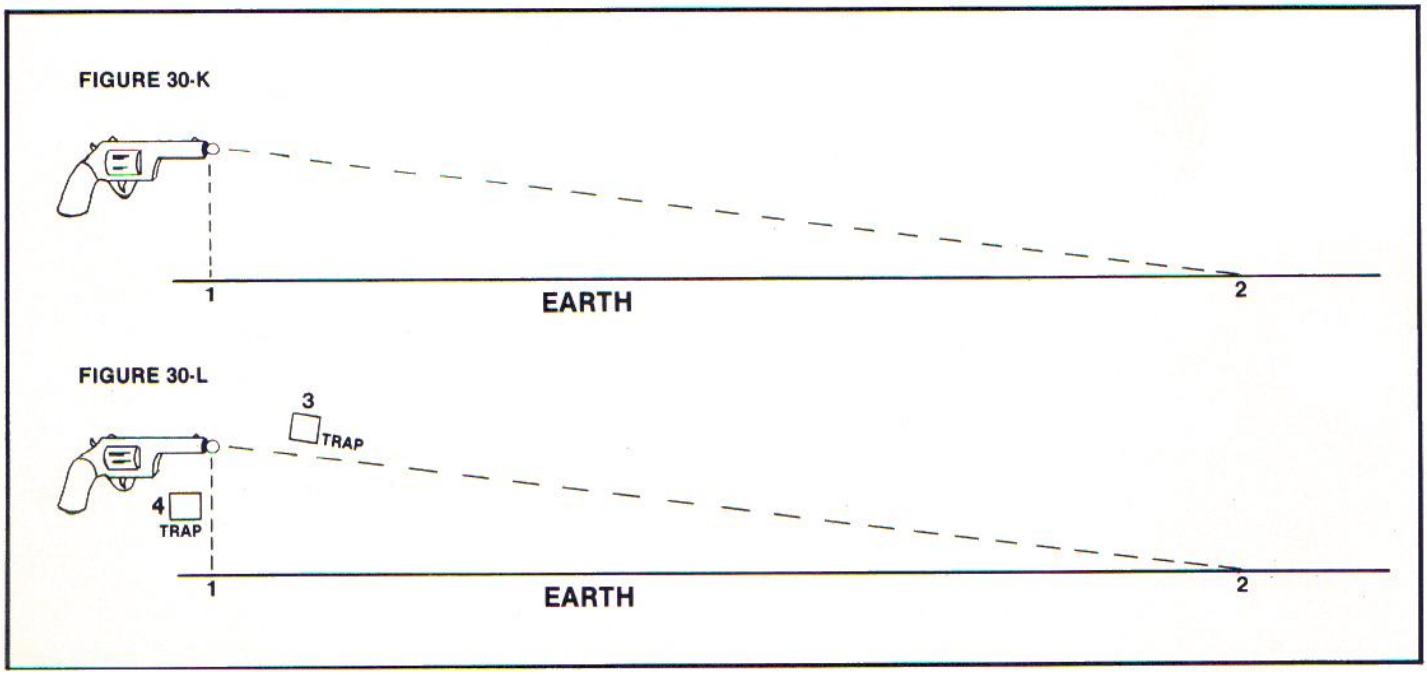
构建一个如图 30-L 描绘的装置。放两个子弹“捕获”装置在枪管后。在电子眼（足够灵敏）和一个合适的机械装置的帮助下，两个运动的子弹将同时在垂直轨道进入捕获器 3 或 4。另外，一个压力计将连接到用来偏移子弹到两个捕获器的机械装置。压力计的目的是测量精确（可见）的将两个子弹偏移到两个捕获器的“反”作用力。

It should be obvious that to deflect the two bullets will require considerably more (Obvious) force with respect to the mass of trap mechanism 3 than for the mass of trap mechanism 4.

明显的，捕获器 3 需要远远多于捕获器 4 的（可见）力来偏移子弹。

QUESTION: Why the difference in force?

问题：为什么会有不同的力?



ANSWER: The difference in the forces demonstrated by the two trap masses is a result of the additional speed added to the composition of their masses. This additional speed is also added to the "natural" speed of the basic building entity of each mass: the gyroscopic-action-particle.

回答：两个子弹表现出不同的力是额外的速度加到它们的质量上的结果。额外的速度同样加到每个物体基础组成

实体陀螺子的“自然”速度上。

Because the mass of trap 3 had greater speed added to its mass than the mass of trap 4, the test instruments would indicate that the mass of trap 3 has a greater inertia effect than the mass of trap 4.

因为捕获器 3 中的子弹比 4 中的子弹有更快的速度，测试装置将指出 3 中的子弹比 4 中的子弹有更大的惯性效果。

ADDITIONAL PROOF: When the additional speed is removed (i.e., the mass is stopped), then the two bullet -masses demonstrate equal inertia effects.

额外的证明：当额外的速度去除后（如，物体静止），两个子弹有相同的惯性效果。

M. Consider the fact that motion (energy) is the "natural" state of the Universe, and that the absence of motion (lack of speed) of Obvious Mass is the "un natural" state of the Universe.

M.认识到运动（能量）是宇宙的“自然”状态，静止（无速度）的可见物体是宇宙的“不自然”状态。

Energy's motion (speed) is always present, even when such energy -in the form of gyroscopic particles moving at the speed of light and spinning at the speed of light - is combined to form an Obvious mass which macroscopically has an apparent absence of motion. However, an observer who was microscopically placed "inside" that Obvious mass would observe the basic energy of all matter - the gyroscopic-action-particle -moving at very high speeds!

能量的运动（速度）总是存在的，即使当能量-陀螺子形式以光速运动并以光速旋转-组成可见物质的形式，宏观上是静止的。然而，微观上观察者可以看到可见物质“内部”组成物质的基础能量-陀螺子-在以非常高的速度运动。

The natural, inertia effect of an Obvious mass is the result of the "speed" of the gyroscopic-action particle which is the basic building entity of all mass.

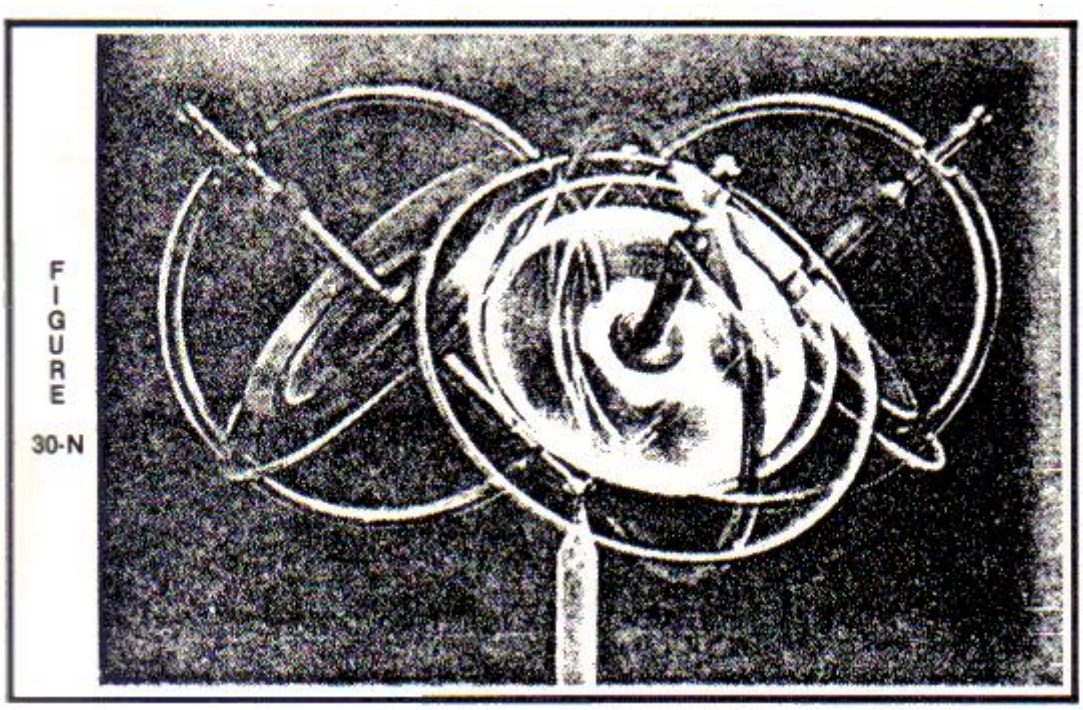
可见物体自然的惯性效果是组成物质的基础实体陀螺子“速度”的结果。

The "negative" and "positive" charge composition of matter does not cancel the speed of the infinitely small, gyroscopic particle masses. Such charges only produce an equaling "counter force" which prevents an (Obvious) mass from behaving as a single, conventional gyroscope. Moreover, the speeds of those infinitely small masses still exist and the existence of such speeds is proven via the observed, inertia effect of an (Obvious) mass.

组成物质的“负”和“正”电荷没有抵消无限小的陀螺子质量的速度。这种电荷只产生相等的“反向力”，阻止（可见）物体像单独的陀螺仪一样运动。然而，这此无限小的物质的速度依然存在，这种速度的存在可以通过可见的惯性效果证明。

N. To further sensitize the reader to the fact that one cannot take the ingenious action of the gyroscopic particle-composition of matter for granted, conduct the following test: (GYROSCOPIC PLANES shown below.)

N.对于更敏感的读者不能认为组成物质的陀螺子的灵敏运动理所当然，在下面的实验中：（下面的陀螺仪平面）



Spin a small, toy gyroscope and then balance it on the end of a rounded pencil point. (See Figure 30-N.) If one lightly holds the pencil at its base, the top end of the pencil will proceed to pivot in all lateral directions at a rapid pace. Under such conditions, one would feel a continuously changing force which is parallel to the Earth's surface.

旋转一个小陀螺仪玩具，之后把它放到圆的铅笔尖上，（看图 30-N）如果一个人轻握铅笔，铅笔顶端将以一定速率在所有侧面旋转。在这种情况下，将感觉到平行于地面的连续变化的力。

Before conducting the test, one would tend to assume that when a gyroscope was moved parallel to the Earth's surface, one would experience no resistance in spite of the speed of the gyroscope's spinning mass.

在做这个实验之前，人们倾向于假定不陀螺仪平等于地面运动时，将没有阻力，尽管旋转的陀螺仪有速度。

"The natural, inertia effect of an Obvious mass is a result of the 'speed ' of the gyroscopic-action-particle which is the basic building entity of all mass."

“可见物体自然的惯性效果是组成物质的基础实体陀螺子“速度”的结果。”

Mass consists of gyroscopic particles spinning at the speed of light and moving at the speed of light. With such rapid motion, a "solid" mass would appear to indicate to the outside observer that the internal gyroscopic particles of the mass are rigidly secured.

物质由以光速旋转和运动的陀螺子组成。因为这种快速运动，一个“固体”物质对于外部观察者来说物质内部的陀螺子是相当牢固的。

However, such gyroscopic particles are not rigidly secured, but are actually internally suspended in space within the mass comprised of such gyroscopic particles. In addition, the gyroscopic particles appear to align the spin of their infinitely small masses to certain "planes of spin."

然而，这种陀螺子不是非常牢固，而是实际悬浮在物质内部空间。另外，陀螺子趋于对齐它们的旋转到“特定平面”。

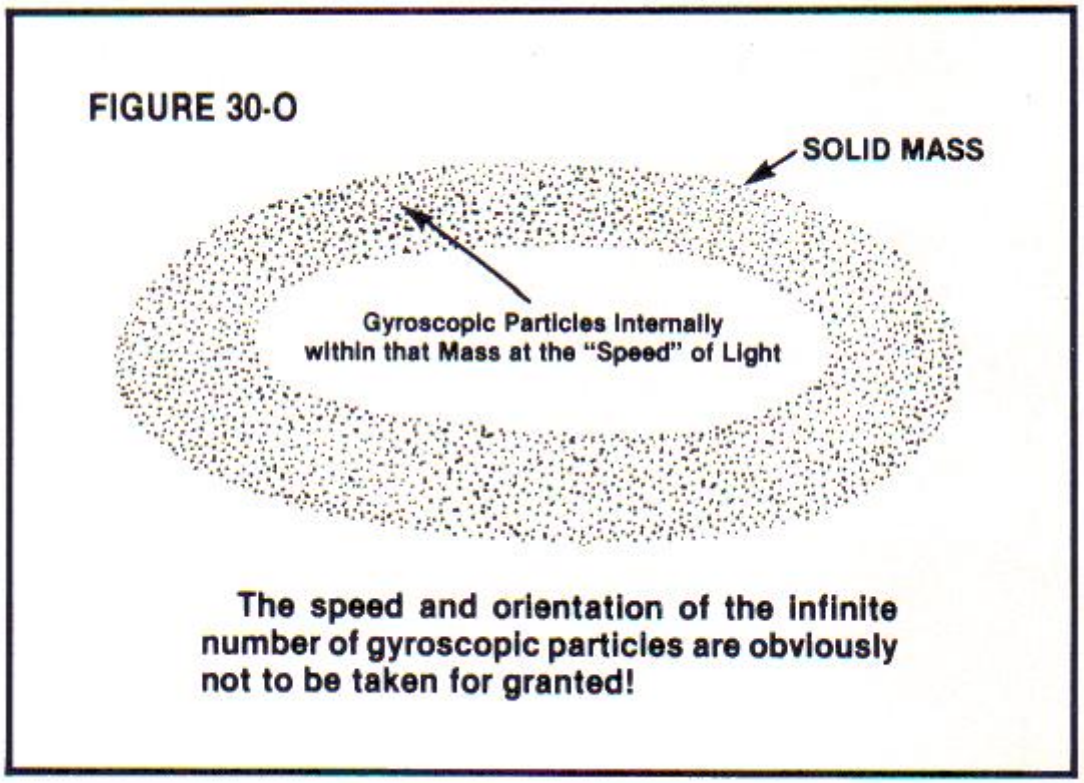


Figure 30-O depicts a "solid" mass consisting of an incredible number of gyroscopic particles electromagnetically coupled and suspended within the space of this (Obvious) mass.

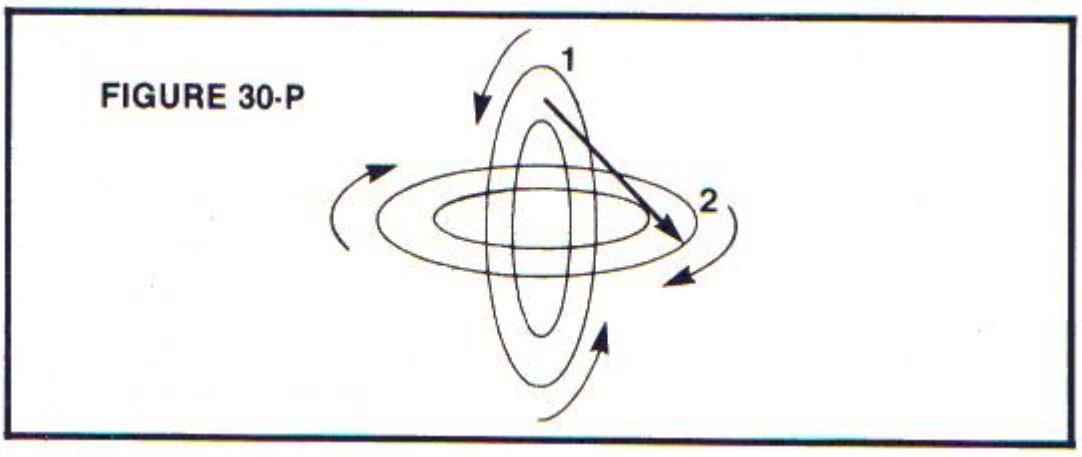
图 30-O 描绘的一个“固体”物质由无数的陀螺子组成，用电磁结合并悬浮在物质的空间中。

P. An Obvious Force exerted upon a mass or "spinning" mass does not create the inertia effect. It is the resistance to that Obvious Force which is perceived as the inertia effect.

P.一个可见的力施加在一个物质或“旋转”物体不会创建惯性效果。对可见力的阻碍被理解为惯性效果。

EXAMPLE: If one tilts the plane of a spinning mass (gyroscope) to an angle equal to the gyroscope's original plane of orientation in space, one will experience a right-angle resistance. The greater the angle of displacement of that gyroscopic plane in a given instant of time, then the greater the resistance. (See Figure 30-P.)

例子：如果一个人倾斜一个旋转物体（陀螺仪）的平面一定角度，相对于陀螺仪的原始定位平面，将感觉到一个垂直方向上的阻力。越大的角速度，阻力越大。（看图 30-P）



If one pivots the gyroscopic plane of spin from point l to point 2, one will observe a noticeable resistance. Such resistance could be called an "inertia effect." If one then stops the gyroscopic spin and repeats the same motion from point l co point 2, then one will notice very little resistance.

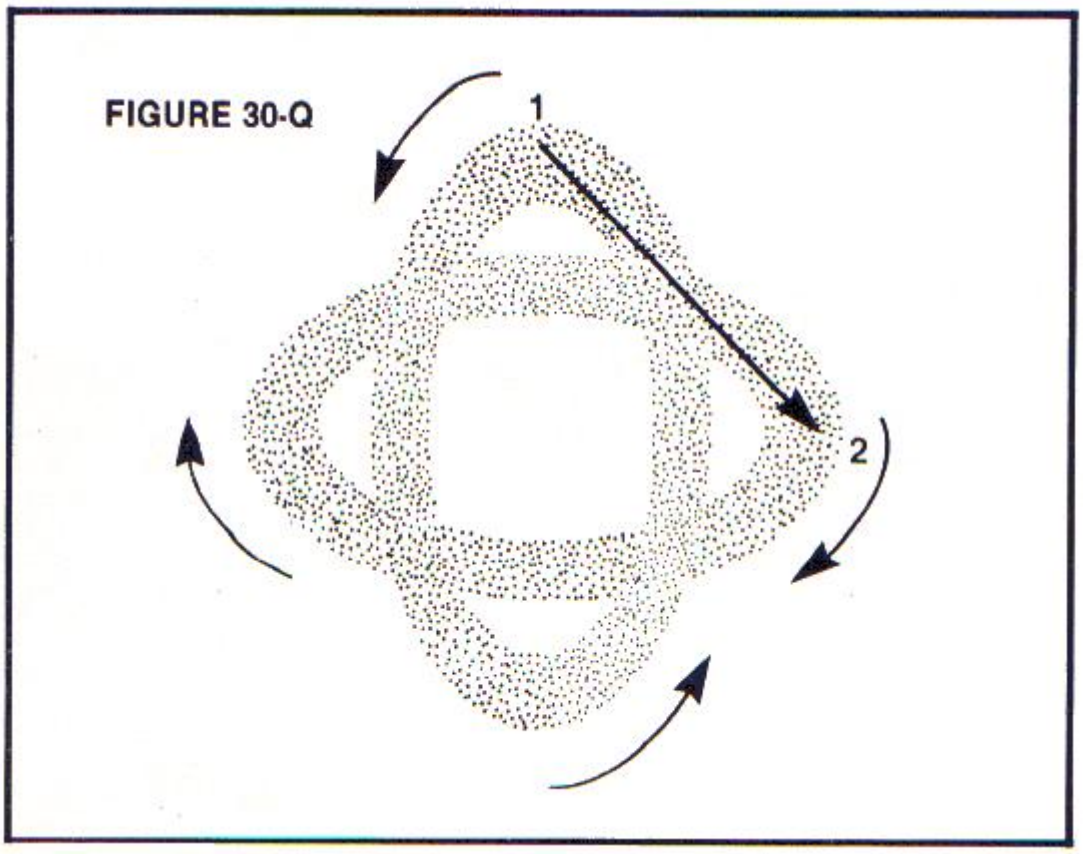
如果倾斜陀螺回旋平面从 1 到 2，将观察到明显的阻力。这种阻碍被称作“惯性效果”。如果停止回旋，重复同样的动作从 1 到 2，将有非常小的阻力。

QUESTION: Why the difference in resistance? ANSWER: Such a difference is a result of the speed of the mass, i.e., the additional speed added to the speed of the gyroscopic spin comprising the mass.

问题，为什么阻力不同呢？回答：这种不同是物体速度的结果，也就是额外的速度加到组成物质的陀螺回旋速度上了。

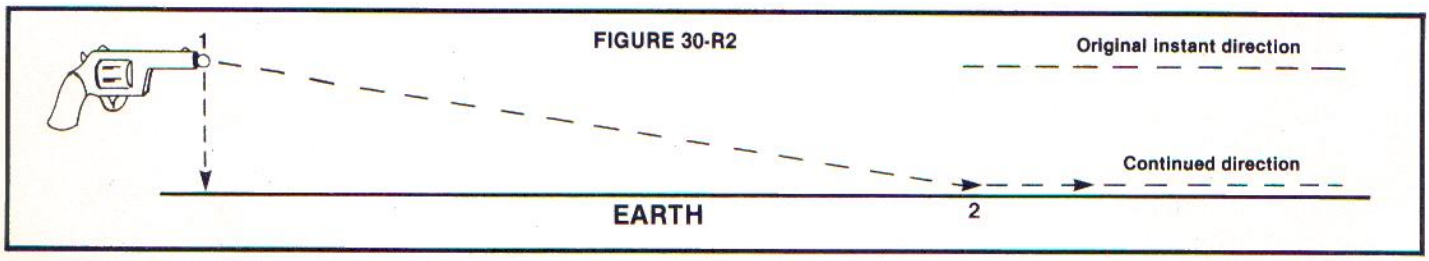
Q. If the results of the test in Figure 30-P are puzzling, repeat the same test but envision the internal motion of the particles comprising the "solid" mass. (See Figure 30-Q.)

Q.如果图 30-P 实验结果令人迷惑，重复同样的实验，但想像组成“固体”物质的陀螺子的运动。(看图 30-Q)



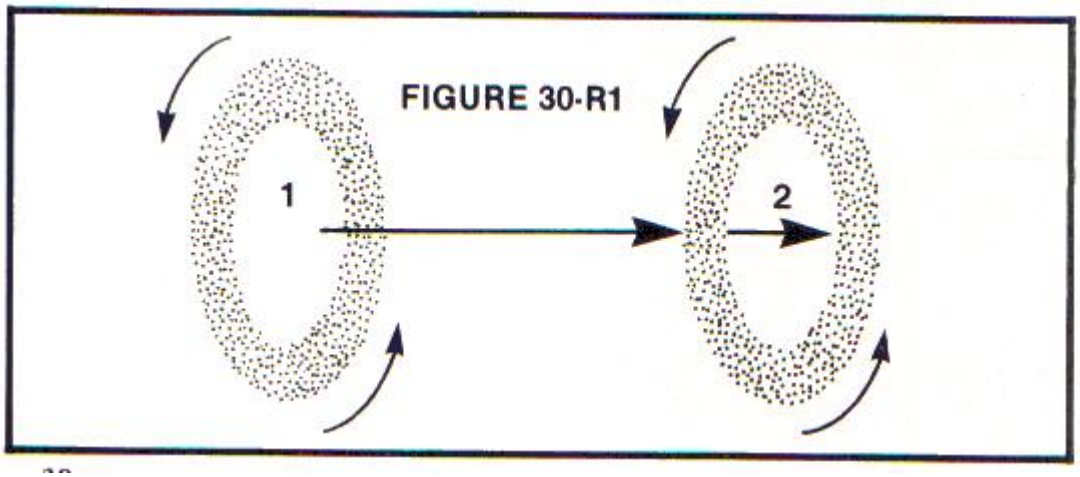
In Figure 30-Q, since the gyroscopic particles travel in opposite directions when the mass is rotated in opposite directions, one can easily understand why the spin direction causes opposite results in terms of whether the spinning mass pivots left or right in response to an Obvious Force. In Figure 30-Q, one should see a similarity between the force required to pivot the mass (composed of gyroscopic particles) from point 1 to point 2 and the force required to deflect a bullet from its initial direction into a trap. (Refer to Figure 30-L.)

在图 30-Q，当物质在相反方向旋转时，陀螺子在相反方向运动，可以很容易理解为什么旋转方向引起相反的结果-对于一个力旋转物体向左或向右进动。在图 30-Q 中，应该看到偏移物体（由陀螺子组成）从 1 到 2 的力和偏移子弹从原来方向到捕获器的力的相似性。(参考图 30-L)



In tests 30-L and 30-Q, the gyroscopic particles comprising the masses involved have been forced to pivot at right angles to their previous plane-in-space direction. The resistance incurred is a direct result of the speed of the particles involved. When the speed of the (Obvious) mass was removed, e.g., when the mass was stopped, then the inertial effect was reduced.

在实验 30-L 和 30-Q 中，组成物质的陀螺子被强制偏移到相对原来空间平面垂直的角度。产生的阻力是参与的粒子速度的直接结果。当（可见）物质停止运动，惯性效果也减小。



Envision a gyroscopic (Obvious) mass as in Figure 30-Rl, which moves the plane of the spinning mass from point 1 to point 2 in a parallel position to the original plane of gyroscopic spin in space.

想象一个回旋（可见）物体如图 30-Rl，移动回旋平面从 1 平行平面 2。

(Remember, mass consists of infinitely small gyroscopic particles spinning at the speed of light and moving at the speed of light.)

（记住，物质由无限小的陀螺子组成，以光速旋转和运动）

In Figure 30-Rl, one will observe noticeably less resistance in moving the mass from point 1 to point 2 compared to the resistance which is encountered in Figure 30-Q.

在图 30-Rl，可以观察到在移动物体从 1 到 2 过程中阻力小于图 30-Q。

QUESTION: Why the difference?

问题：为什么不同?

ANSWER: There is an extreme mechanical difference between Figure 30-Q and Figure 30-Rl. This difference is a result of the fact that the particles comprising the spinning mass in Figure 30-Rl have had their plane of spin moved parallel to their origin al plane in space.

回答：图 30-Q 和 30-Rl 有极大的力学不同。不现是图 30-Rl 组成回旋物质的粒子被移动到和原始平面平行的位置。

The mechanical difference is similar to the test in Figure 30-K in which the bullet mass was permitted to collide with the ground. If the bullet had continued traveling in a straight line following impact with the Earth's surface, the bullet mass would have traveled in a direction parallel to its original instant direction. (See Figure 20-R2.)

力学上的不同和图 30-K 实验中子弹质量碰到地面相似。如果子弹一直运动在一条直线，子弹将运动在和初始方向平行的方向。(看图 20-R2)

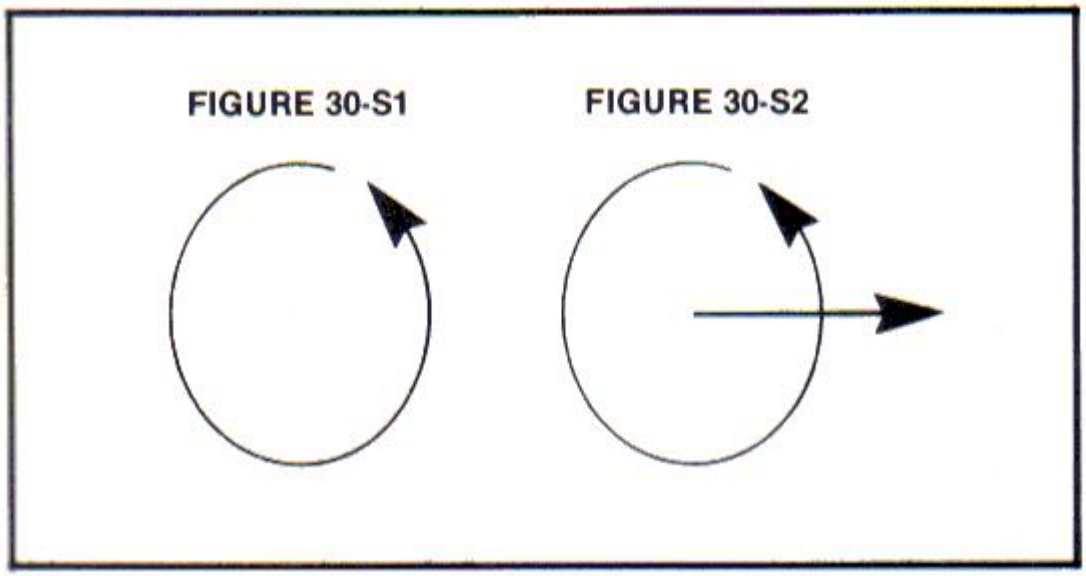
S. Pay close attention to the test results in Figure 30-R2: one can be deceived into believing that the inertia effect of the bullet masses did not change because the Obvious Force of gravity caused both bullet masses collide with the Earth at the same instant. From the test in Figure 30-L, it has been demonstrated that there is a difference in inertias, but that the difference is deceptive. The same difference is true for the test in Figure 30-Rl. I have no doubt that if one could accelerate the speed of the rotating mass (in Figure 30-Rl) to that of light, one would find a greater resistance than at conventionally slow speeds of only

thousands of revolutions per minute.

S.注意图 30-R2 实验的结果：有人会相信子弹的惯性效果没有改变，因为可见的策略使两个子弹同时碰到地面。从图 30-L 的实验，已经证明惯性是变化的，但区别是有迷惑性的。同样的不同对图 30-Rl 中的实验也是正确的。我确信如果一个人可以加速旋转物体（图 30-Rl）到光速，将发现比传统只有几千转每分钟更大的阻力。

REASON FOR SUCH GREATER RESISTANCE: The particles comprising that mass have a fixed plane or position in space, e.g., a circular motion as in Figure 30-Sl.

更大阻力的原因：组成物质的粒子在空间有一个固定的平面或位置，例如图 30-Sl 中的一个圆周运动。



In Figure 30-Sl, one imposes a lateral direction upon a particle traveling in a rotational plane direction. The energy necessary to impose this directional change must be imposed from an external source. If one wishes to accelerate the speed of the lateral direction, one must impose additional energy to overcome the previously compounded motion (speed) of the particle in space.

在图 30-Sl 中，对一个在旋转平面方向运动的粒子强加一个横向方向。方向改变需要的能量必须是来自外部源。如果希望在横向加速，必须强加额外的能量克服先前粒子的复摆运动。

"The gravity, inertia, and weight effects will all decrease or increase as gyroscopic particles (comprising all Matter) are physically removed or added to the mass in accordance with Einstein 's equation of E = MC^2"

“引力，惯性和重量效果一起减少或增加，随陀螺子（组成所有物质）物理上移除或加入到质量中，遵守 E = MC^2”

It should be obvious from the above Facts that, like the gravity effect, the inertia effect is very deceptive. Both effects are a result of the gyroscopic particle composition of all matter.

从上面的事实可以明显看出，像重力效果、惯性效果是非常迷惑人的。两种效果是组成物质陀螺子的结果。

The gravity, inertia, and weight effects will all decrease or increase as gyroscopic particles (comprising all matter) are physically removed or added to the mass in accordance with Einstein 's equation of E = MC^2. In addition, the gravity, inertia, and weight effects represent only a small percentage of the "unity factor of 1" (discussed in Sections 29-C and 29-D) characteristic of all gyroscopic particles comprising all matter. As mathematics would predict, all three effects represent the actions of one mechanical entity -the gyroscopic particle.

引力，惯性和重量效果一起减少或增加，随陀螺子（组成所有物质）物理上移除或加入到质量中，遵守 E = MC^2。另外，引力，惯性和重量效果只是“整体 1”（在 29-C 和 29-D 部分讨论）的很小一部分。如数学家预言的，所有三种效果只是陀螺子运动的表象。

The following statement by Albert Einstein verifies my mechanical teachings:

下面爱因斯坦的陈述证明了我的学说：

"If a body gives off the energy E in the form of radiation, its mass diminishes by E/c ± ... The mass of a body is a measure of its energy-content; if the energy changes by E, the mass changes in the same sense by E/c ± ... If the theory corresponds to the facts, radiation conveys inertia between the emitting and absorbing bodies."

“如果一个物体以辐射形式释放能量 E，它的物质减少 E/c ±…物体的质量是内能的度量；如果能量按 E 改变，质量也按 E/c ±改变…如果理论和事实一致，在发射和吸收的物体之间辐射传递惯性。”

The previous quotation in action 30-A concerning Newton's mathematics further verifies my mechanical teachings. The interrelated "oneness" of all the various Facts I have presented is more important than any Fact by itself.

前面在 30-A 的引用，关于牛顿数学进一步证明了我的学说。我介绍的所有变化事实关联到的“单一原因”比事实本身更重要。

第 18 章 热力学三大定律

Chapter 18 HEAT AND THE THREE LAWS OF THERMODYNAMICS

"... I have built my house on the foundation of your theory of Latent heat and ...I owe a just way of thinking on these subjects to you."

- From a latter by James Watt to Joseph Black, December 13, 1782

“…在你的潜伏热理论基础上我已经创立了我的理论…我在这些学科的思考方式来自于你。”

-来自瓦特给约瑟夫・布莱克一封信，1782 年 12 月 13 日

I wish to pay tribute to Joseph Black (1728-1799), Scottish chemist and physicist, who is one of the greatest scientists who ever lived. I have no doubt in my mind that had I visited Joseph Black in the 1760's and had I informed him that E = MC2, he would have replied: "I believe what you have stated is very possible since my years of research have indicated to me that some immense energy does exist in mass or matter." With Joseph Black's brilliant work and great insight, he would have had no difficulty or hesitation in accepting the validity of E = MC2.

我希望给约瑟夫・布莱克(1728-1799)称赞，苏格兰化学家和物理学家，一个最伟大的科学家。我毫不怀疑，在我 1760 年我拜访布莱克并告诉他 E = MC2，他答复：“我相信你所说的是非常可能的，因为为多年的研究已经指明极大的能量存在于质量或物质中。” 布莱克毫不犹豫的接受了 E = MC2 的正确性。

It is appropriate first to discuss chemistry and heat as a prelude to analyzing the Three Laws of Thermodynamics.

作为分析热力学第三定律的开始，先讨论化学和热。

A. Chemistry is the study of the composition of all forms of matter found in the Universe. I will demonstrate that chemistry is consistent with my single teachings concerning the nature of electromagnetic energy:

A.化学是来研究宇宙中物质所有形式组成的学问。我将证明化学和我单一的关于电磁原理的学说是一致的。

In chemistry it is presently stated that every bonding between atom and atom, as well as between molecule and molecule, represents potential energy sources.

化学目前认为原子键和分子键是热能的一种表现。

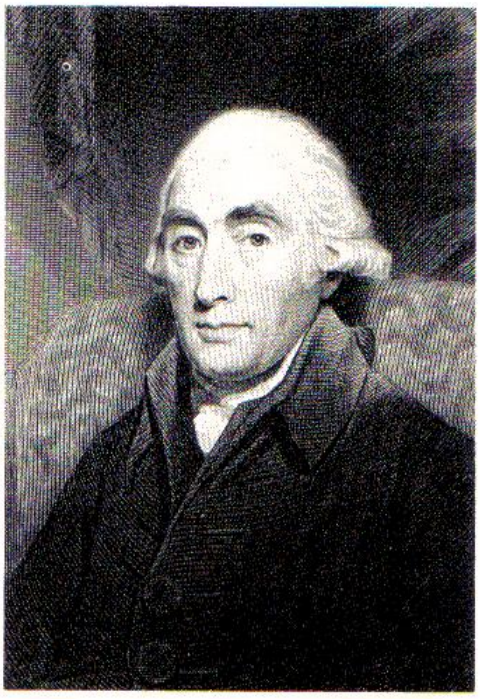
I now introduce the fact that all chemical reactions always involve electromagnetic energy. It makes no difference whether the reactions are endothermic [when the reaction absorbs heat, Light, or electrical energy (all forms of electromagnetic energy)] or exothermic [when the reaction releases heat, light or electrical energy]. Scientific conclusion: all chemical reactions are the result of absorbing or releasing electromagnetic energy. Furthermore, electromagnetic energy in the form of the previously described gyroscopic particles comprises all matter.

我现在介绍一个事实，所有的化学反应都有电磁能的参与。不论反应是否吸热[当反应吸热、光或电能（所有形式

的电磁能）]或放热[当反应放热、光或电能]。科学结论：所有化学反应是吸收或释放电磁能的结果。更深入的，电磁能是组成所有物质的陀螺子的一种形式。

B. It is appropriate to analyze a serious mistake once made in science: I return to the debate concerning whether heat was a transferable entity called Caloric, or whether heat was simply the result of motion as stared by the critics of the Caloric Theory. The motion concept of heat is still believed today in science and such a concept led to the Kinetic Theory.

B. 这可以用来分析科学上的一个严重错误：我回到关于热是一种叫热能的可传递的实体或简单的是热量理论中运动的结果的辩论。至今，热运动的观念依然被相信，这种观念导致了分子运动论的产生。



Joseph Black
Courtesy of Edgar Fahs Smith Collection. University of Pennsylvania

About 1770, Joseph Black made some brilliant discoveries concerning heat. Black showed that heat represented a quantity of something and that temperature was the degree of hotness. In effect, he had discovered that heat and temperature were not the same. Not one of Joseph Black's contemporaries had been able to establish a sharp distinction between heat and temperature.

大约 1770 年，布莱克有了一些关于热发现。布莱克展示了热是大量某种东西的表象，温度是热的程度。实际上，他已经发现热和温度是不同的。当时没有一个人能建立热和温度明显的区分。

To the great surprise of Joseph Black's colleagues and even to us today, Black demonstrated that water continues to increase in temperature until it comes to a boil and then the temperature rise will stop and remain the same until all the water is boiled away. Such a constant temperature is observed even if extreme heat is employed. Moreover, the reverse is true when the vapor or steam condenses.

布莱克让他的同事即使是今天的我们非常吃惊的是，他证明水连续升温直到沸腾，之后温度上长停止并保持直到水煮干。这种连续的温度即使在加极大热时也不变。此外，返过来也是正确的，当蒸汽凝结。

Joseph Black also established that a mixture of ice and water remains at the same temperature - although heat may be emitted or absorbed -until it is transformed entirely into ice or water. Black used the term "latent heat" to describe the process of heat absorption.

布莱克同时组成水和冰的混合物保持在同一温度-虽然热量可以释放或吸收-直到它完全变成冰或水。布莱克用术语“潜伏热”描述热吸收的过程。

Black wrote: "My conjecture, when put into form, was to this purpose, I imagined that, during boiling, heat is absorbed by

the water, and enters into the composition of the vapor produced from it, in the same manner as it is absorbed by ice in melting, and enters into the composition of the produced water."

布莱克写到："我猜想，当状态变化，为了这个目的，我想象，在沸腾时，将被水吸收，进入水蒸气的组成中，同样的行为是冰吸热融化，热进入到产生的水中。"

It is quite apparent to me that Joseph Black's curiosity and powers of reasoning were extremely high, considering the limited scientific knowledge available during his time. Black understood what others -even today -have not understood.

我看到布莱克的好奇心和推理能力非常高，考虑到当时的科学水平。布莱克明白了其他人-即使今天-也没明白我东西。

Without any doubt in his mind, Joseph Black knew that heat was absorbed and emitted by Matter and that heat was some type of entity that composed all Matter. He simply did not know what this entity is: gyroscopic, electromagnetic energy! The Facts clearly show that all Matter is changed in its mechanical characteristics as it absorbs or emits heat, i.e., a random flow of gyroscopic-action-particles.

毫无疑问，布莱克知道热由物质吸收和释放，热是组成物质的某种实体。他只是不知道这个实体是：回旋电磁能量！事实清楚的证明，所有物质通过吸收或释放热来改变它的力学特性，例如任意流动的陀螺子。

"***With Joseph Black's brilliant work and great insight, be would have had no difficulty or hesitation in accepting the validity of E = MC2."***

"以布莱克的聪明和洞察力，他毫不犹豫的接受了 E = MC2 的正确性。"

Following Black's discoveries, this basic idea was so refined and developed that it conveniently accounted for all heat phenomena observed at the time. To explain all heat phenomena, scientists turned to the old concept which was later known as the Caloric Theory.

布莱克的发现，这个基本观点是如此精炼和先进，可以方便的计算所有观察到的热现象。为了解释所有的热现象，科学家回到原来的观念，后来知名的热质说。

The following are the essential postulates of the Caloric Theory as established in 1779:

下面是热质说的基本假定，建立于 1779 年：

(1) Caloric is an elastic fluid whose particles repel one another.

(2) Caloric particles are strongly attracted by the particles of other Matter, and different kinds of Matter attract caloric with different strength.

(3) Caloric is indestructible and uncreatable.

(4) Caloric can be either "sensible" or "latent," i.e., either felt or stored. Latent heat is "chemically" combined with particles of Matter to change a solid into a liquid or a liquid into a vapor.

(5) Caloric does not have weight. [Of course, heat does have weight according to E = MC2.]

（1）热质是弹性液体，它的粒子相互排斥。

（2）热质被其它物质粒子强烈吸引，不同类型的物质对热量的吸引强度不同。

（3）热质是不可毁灭的不可创建的。

（4）热质是可以被"感知"或"潜在"的，例如，感觉或存储。潜在热是物质粒子的"化学"结合，改变一个固体到液态或液态到气态。

（5）热质没有重量。[自然，热量没有质量可以遵守 E = MC2]

The theory offered in opposition to the Caloric Theory was never so direct and this opposition theory required a long time to evolve. As early as 1620, Sir Francis Bacon had said, "Heat itself, its essence and quiddity, is motion and nothing else." This

line of thought was endorsed by many other scientists following Bacon's time.

反对热质说的理论从来没有这么直接，这种相反的理论需要很长时间发展。在更早的 1620 年，培根曾说过“热本身，本质是运动，什么也不是。”在培根之后，这种想法被很多科学家支持。

At this point it is important to indicate a scientific face: during the time this Caloric-Kinetic argument was undergoing intense debate, there was absolutely no scientific acceptance that there was even a connection between electricity and magnetism! It is important to remember that heat is "gyroscopic" electromagnetic energy! Question: If one does not understand that there is even a connection between electricity and magnetism, how can one really understand heat, which is "gyroscopic" electromagnetic energy?

在这点上需要指出一个重要的科学情况：在热质说被热烈讨论的时期，完全没有接受电和磁的联系！记住，热是“回旋”电磁能量！问题：如果一个人不明白电和磁的关系，怎么真正明白热-一种“回旋”电磁能量？

In 1788, Count Rumford (also known as Benjamin Thompson, British physicist, 1753-1814) rejected the Caloric Theory of heat on the basis that heat was a form of motion. He accepted this "motion effect" as a result of observing the boring of a cannon barrel. He concluded that friction could generate an inexhaustible supply of heat. Question: Did he have any conception of E =MC2? Answer: No! The only point Rumford proved with this cannon-boring experiment is that E = MC2.

在 1788 年，康特.拉姆福德（本杰明-汤普森，英国物理学家，1753-1814）反对热质说，基于热是运动的一种形式。它接受“运动效应”是观察炮身的结果。他总结到，摩擦可以产生无穷的热量。问题：他有任何 E =MC2 的观念吗？回答：没有！唯一可取点，拉姆福德大炮实验证明是 E = MC2。

Keep the cannon-boring experiment in mind, because in a few pages I will demonstrate that heat release is a result of the compression of atomic entities which comprise all matter. For those who are not familiar with metal cutting on a lathe, high pressure is used to push the cutting tool into the metal being cut. Such high pressure is a result of the mechanical power of the screw.

记住大炮实验，因为后面几页我将证明热释放是对组成物质的原子实体压缩的结果。对于不熟悉机床切割金属的人，高压用于推动切割工具进入被切金属。这种高压是扭转的机械能量的结果。

In 1799, Sir Humphry Davy (English chemist, 1778-1829) caused two pieces of ice to melt by rubbing them together while in freezing conditions. He claimed that the result of this particular ice experiment constituted a failure of the Caloric Theory since the experiment proved that the resulting heat was simply caused by motion.

在 1799 年，汉弗-戴维（英国化学家，1778-1829）用两片冰摩擦金属，在极冷的环境下。他声称特殊的冰实验结果不支持热质理论，实验证明热是简单运动的结果。

However, Davy's statement is not true! If the heat was simply the result of motion, then the two pieces of ice would have melted just as quickly by moving them separately while in the freezing temperature. Anyone knows that this simply isn't true. I will show that heat release is the result of mechanical compression. [Remember that it wasn't until 1820 that the Danish physicist Oersted discovered a connection between electricity and magnetism. Heat, electricity, and magnetism are all electromagnetic energy.]

然而，戴维的陈述是错的！如果热是运动的简单结果，在极冷的环境中分开快速运动它们，两片冰将融化。任何人都知道这是不对的。我将展示热释放是机械压缩的结果。[记住，还没有到 1820 年丹麦物理学家奥斯特发现电和磁的联系。热、电、磁都是电磁能量。]

"... heat release is a result of the compression of atomic entities which comprise all Matter."

“…热释放是对组成物质的原子实体压缩的结果。”

Let's examine several facts: Molecules consist of atoms. Atoms consist of smaller entities.

让我们检查几个实事：分子由原子组成。原子由更小的实体组成。

Question: What comprises the smaller entities? Remember, from the beginning of this Book, I have hypothesized that atoms and all Matter consist of electromagnetic energy, i.e., gyroscopic-type-particles.

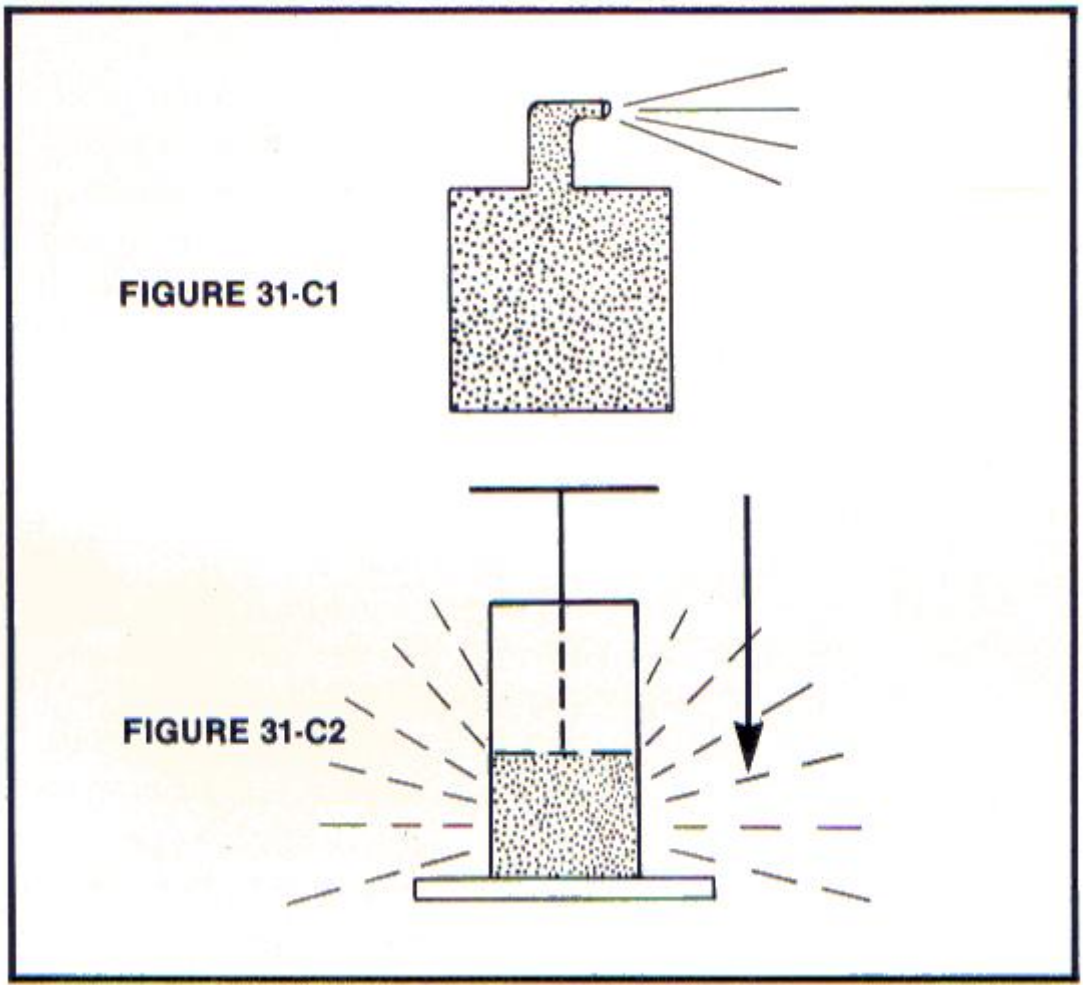
问题：更小的实体由什么组成?记住，从这本书的开始，我已经假定原子和所有物质由电磁能量组成，也就是，陀螺子。

The scientific hypothesis concerning the interior structure of the atom has changed continuously over the years. Over thirty fundamental atomic particles have been released from the nucleus of an atom. The more that is known, the more the mystery deepens. Presently, physicists are no longer even certain that protons, neutrons, and electrons do, in fact, occupy space. Some hypotheses describe these particles as waves or "points without volume" -mathematical singularities haunting space.

关于原子内部结构的假说这些年一直在变。超过 3 种基础粒子被从原子核释放。知道的越多越神秘。目前，物理学家甚至不确定中子、质子和电子有实际的空间。一些假说描述这些粒子为波或“没有体积的点”-数学奇点缠扰空间。

Based upon the present scientific understanding of Matter, this same description would apply to the energy in the force fields of a magnet. However, I have already shown that such force fields are all electromagnetic energy and possess gyroscopic, mechanical-like characteristics which can be explained and predicted. Such characteristics are also true for heat absorption and release:

基于当前科学对物质的理解，同样的描述将用于磁体力场的能量。然而，我已经证明这种力场是电磁能量，有陀螺的力学特性，可以被预测。这种特性同样对热的吸收和释放是正确的:



Some scientific books presently teach that a compressed gas cools or loses heat when it expands (see Figure 31-C1), and that a gas gains heat when compressed (see Figure 31-C2).

当前一些科学教授, 压缩气体在扩张时会放热变冷 (看图 see Figure 31-C1) , 气体被压缩时会获得热量 (看图 31-C2) 。

C. This is simply not true! What occurs is just the opposite! When the gas is compressed, the atoms within the molecules are pushed closer together, emit heat (electromagnetic energy comprising all atoms), and cool down. The gas feels hot "to the touch" for a given time because the atoms within the gas emit - not absorb - heat. [Such a process is analogous to squeezing a wet sponge (atoms containing gyroscopic particles representing electromagnetic energy) and releasing water (the gyroscopic particles or electromagnetic energy flowing in a random direction). These same gyroscopic particles released from the atoms of

the gas undergoing compression will then be absorbed by the atoms within your finger, causing such atoms to expand. Such expansion will be perceived by you as the sensation of "heat."

C. 这是完全错误的！发生的事恰恰是相反的！当气体被压缩，分子中的原子被推到更近，释放热量（组成原子的电磁能量），并变冷。气体那时感觉起来变热是因为气体原子释放-没有吸收-热。[这个过程是类似于挤压湿海绵（包含陀螺子的原子代表电磁能量）会出水（陀螺子或电磁能量随机流出）。]这些相同的陀螺子从压缩的气体原子释放，之后被你的手指吸收，引起原子扩张。这种扩张被感知为“热”。

"When the gas is compressed, the atoms within the molecules are pushed closer together, emit beat (electromagnetic energy comprising all atoms), and cool down."

“当气体被压缩，分子中的原子被推到更近，释放热量（组成原子的电磁能量），并变冷。”

QUESTION: What does the statement "to become hot" really mean?

问题：“变热”到底意味着什么?

ANSWER: It means to absorb heat. To "become cool" means to emit heat. When the gas expands, the atoms absorb heat, i.e., "gyroscopic" electromagnetic energy equal to that which the atoms originally lost on being compressed. This is why the gas will "feel" cold to your hand since the gas absorbs heat from your hand. When expanding, the gas molecules also possess inertia as a result of producing a continuous Unobvious Force when under pressure (similar to pulling on one end of a taut rope and having it snap in reaction). The concept of "speed" is also a determining factor -refer to the speed discussion in Section 30.

回答：它代表吸收热量。“变冷”代表释放热量。当气体扩张，原子吸热，也就是“陀螺”电磁能量，等于原子开始压缩失去的能量。这是为什么你的手“感觉”气体冷，因为气体从你的手吸收热量。当扩张时，气体分子同样有惯性，在压力下产生连续不可见的力（类似于突然拉紧绳索的一端）。“速度”的概念同样是关键因素-参考 30 部的讨论。

C. Examine several additional facts:

C. 验证下面额外的事实：

1. In the 17th century, Robert Boyle demonstrated that for a fixed quantity of gas, the volume and pressure are inversely proportional , i.e., halve the volume and double the pressure; double the volume and halve the pressure.

2. In the 18th century, Daniel Bernoulli demonstrated that by increasing the temperature of a gas, one causes it to expand in a definite mathematical proportion, i.e., double the absolute temperature of a gas under constant pressure and the gas volume doubles.

3. In 1787, Jacques Charles established that all gases held at constant pressure will expand in proportion to the amount of heat applied.

4. John Dalton, English chemist and physicist (1776-1844), observed a 50°F. increase in the temperature of a gas when its volume was halved by rapid compression.

1. 在 17 世纪，Robert Boyle 证明一定数量的气体，压力和体积是成反比的，也就是说，体积减半压力增倍；体积增倍压力减半。

2. 在 18 世纪，Daniel Bernoulli 证明增加气体温度，会引起扩张一定的比例，也就是说，在恒压下双倍温度体积加倍。

3. 在 1787 年，Jacques Charles 确定气体在恒压下体积扩张将和施加的温度成比例。

4. John Dalton，英国化学家和物理学家（1776-1844），当气体体积压缩到一半时温度增加 50°F.。

QUESTION: What do these facts indicate?

问题：这些事实指明什么?

ANSWER: The "gyroscopic" electromagnetic energy comprising atoms (which comprise molecules) has a particular "space area" necessary for any given substance. If one compresses the area demanded by this gyroscopic electromagnetic

energy comprising atoms, such atoms will emit a definite, minute mathematical portion of this electromagnetic energy in the form of heat, i.e., a random flow of gyroscopic particles. Such heat release permits a smaller demand area for the balance of the remaining gyroscopic particles (electromagnetic energy) comprising the atoms under pressure. If heat is added to a given system, the demanded area is increased due to the minute gain of additional gyroscopic particles resulting in a pressure rise relative to heat input.

回答：组成原子（原子组成分子）的“陀螺”电磁能量对于任何物体需要有一个特定的“空间”。如果一个人压缩组成原子的陀螺子需要的空间，这些原子将以热的形式发射一定的、极小的自己的电磁能量，也就是说，自由运动的陀螺子。这种热释放允许在一定压力下组成原子的陀螺子（电磁能量）需要更小的空间。如果热加入到一个给定的系统，需要的空间将加大，因为额外的陀螺子会导致压力上升。

E. PROOF:

E. 证明：

(1) Raise a liquid's temperature to the boiling point and there will be a "pause" during which time heat (electromagnetic energy) is absorbed without a further rise in temperature, and enabling the liquid to transform into a gas.

（1）加热液体到它的沸点，这时温度将“停止”上升，液体吸收热（电磁能量）但温度没有上升，液体变成气态。

(2) The reverse is true when the gas is condensing. There will be a "pause" in temperature decline at the boiling point. Although heat is steadily emitted, the temperature will remain constant until all the gas has liquified.

（2）当气体冷凝时也是正确的。液体的温度“停止”在沸点。虽然热量在稳定发出，温度将持续到气体被液化。

EXPLANATION: In PROOF (1), the liquid is expanding into a gas, consequently, the electromagnetic energy (gyroscopic particles) comprising the atoms' demanded area increases only with the absorption of additional electromagnetic energy input (heat) which results in expanding inertia (speed). In PROOF (2), the gas is decreasing in volume, consequently, the electromagnetic energy comprising the atoms' demanded area decreases as the atoms emit their electromagnetic energy composition received initially in PROOF (1).

解释：在证明（1）中，液体扩张为气体，因此，组成原子的电磁能量（陀螺子）需要的空间增加，只是因为吸收额外的电磁能量输入（热）导致扩张的惯性（速度）。在证明（2），气体减少体积，因此，组成原子的电磁能量需要的空间减少，原子放出它们的电磁组成部分-在证明（1）中接收到的。

(3) When the pressure on a liquid is lowered, its boiling point drops. When the pressure is increased, the boiling point rises. QUESTION: Why?

（3）当液体的压力下降时，它的沸点下降。当压力上升时，沸点上升。问题：为什么?

ANSWER: When the pressure is reduced upon a liquid, the electromagnetic composition of the atoms' demanded area expands and therefore has room to physically accept additional gyroscopic particles (electromagnetic energy). Therefore, such atoms can and do absorb additional heat. As this process occurs, additional gyroscopic particles are absorbed by the atoms to maintain the expanding demanded area. If the atoms are absorbing heat, a lesser temperature will be required to cause the atoms to absorb heat. As a result, the boiling point is lowered.

回答：当压力下降时，原子的电磁组成需要的空间扩张，因此有空间接收额外的陀螺子（电磁能量）。因此，这些原子可以吸收额外的热。当这个过程发生，额外的陀螺子被吸收，通过原子扩张需要的空间。如果原子吸收热量了，更低的温度就会引起原子吸收热量。结果是，沸点下降了。

When the pressure on a liquid is increased, the "gyroscopic" electromagnetic composition of the atoms' demanded area has been decreased; consequently, such atoms will emit heat. If the atoms are attempting to emit heat, a greater temperature (or higher temperature difference) will be required to cause the atoms to absorb heat. As a result, the boiling point of the liquid will be higher.

当液体压力增加，组成原子“陀螺”电磁能量需要的空间减少；因此，这些原子放出热量。如果原子试图放出热量，更高的温度（或更高的温差）才能引起原子吸收热量。结果是，沸点升高。

(4) To raise the temperature of a gram of water by 1°C to its boiling point requires one calorie for each degree. However, when the 100°C boiling point is reached, 540 calories are needed to boil the water away.

（4）为了升高一克水 1°C 需要 1 大卡热量。然而，当 100°C 沸点达到时，540 卡热量才能使水气化。

QUESTION: What happened to this additional heat input?

问题：额外输入的热量发生了什么?

ANSWER: The heat input expands the demanded area of the "gyroscopic" electromagnetic composition of the atoms within the water molecule.

回答：输入的热量扩张水分子中组成原子的“陀螺”电磁能量需要的空间了。

PROOF: Water expands more than 1,500 times as it turns into water vapor or steam! (This result is exactly as the brilliant Joseph Black originally predicted - see Section 31-B.)

证明: 水扩张需要 1500 倍热量才能变成水汽或蒸汽! (这个结果是精确的, Joseph Black 最先预测到-看 31-B 部分。)

Critics of the Caloric Theory stated that the Theory provides no explanation for the source of the motive power for steam expansion. It is quite obvious that the atoms of the demanded area (needed for the gyroscopic-type-particles of the electromagnetic composition within the atoms) have acquired considerable inertia with the capability to expand 1,500 times. Such expansion has the capacity for performing Obvious Work, i.e., pushing a piston or turbine. However, pushing a piston or turbine places the vapor under a compression pressure. As a result of such pressure, heat is emitted and the vapor tends to condense and reduce the demanded area of the gyroscopic-type- particles of the electromagnetic composition of the atoms within the water molecule.

热质学说的批评家说这个理论没有解释蒸汽扩张的原运力的来源。很明显，需要空间的原子（需要陀螺子，原子的电磁组成部分）已经得到相当大的惯性来扩大 1500 倍的容量。这种扩张可以产生可见功，也就是，推动活塞或汽轮机。然而，推动活塞或汽轮机使蒸汽处于压缩状态。结果是热量放出，蒸汽趋于浓缩，减少水分子中原子电压能量的陀螺子需要的空间。

E. QUESTION:

E: 问题:

(1) When a gas is compressed and the pressure maintained, why does the gas not emit heat continuously instead of only during compression?

（1） 当气体压缩并保持压力，为什么气体不发出热量而只有压缩时发出?

ANSWER: Once compressed to a particular demanded area by a continuous force, the gyroscopic-type- particles of the electromagnetic composition of the atoms within the gas retain the vast majority of their electromagnetic energy (heat) within the atoms. Such retention results in an Unobvious Force against and equal to the force being continuously applied. When the gas is released, it will have inertia similar to the effect of pulling on a taut rope and causing it to snap. (See "speed” discussion in Section 30-L.)

回答：一旦用连续的力压缩到一个特定需要的空间，气体原子电磁组成的陀螺子将保持它们原子中主要的电磁能量。这种保持导致不可见的力对抗并等于连续施加的力。当气体被释放，它将有惯性类似于拉紧绳索。（看“速度”的讨论，30-L 部分。）

Energy is internally used within the atoms of the gas and within the atoms of that substance applying the continuous force on the gas. The real distinction is between Obvious Work and Unobvious Force (as I have already explained earlier) and the fact that E = MC2.

能量用于气体的原子和对气体原子施加连续力的物体。真实的区别在可见功和不可见功之间 (我已经早前解释过)，事实是 E = MC2。

Actually I am amazed that others have had difficulty in understanding what is so clear to me. The facts are there! In

chemical reactions, there are many instances where large quantities of electromagnetic energy (heat) are emitted or absorbed. Yet the Matter resulting from the reactions (supposedly) always weighs the same. EXAMPLE: In separating the hydrogen and oxygen molecules of water, large quantities of heat are required, i.e., 5,400 ° F. which is twice the melting point of iron. The resulting gas volumes of oxygen and hydrogen will weigh the same as the water did. If one strikes a match, the oxygen and hydrogen will unite back into water. Such water will weigh the same as before, but it will release all the energy (gyroscopic particles) originally acquired during the separation of the gases.

实际上我惊叹于别人难于理解对我这么清楚的概念。事实就在这！在化学反应中，很多例子会发出或吸收大量的电磁能量（热）。然而反应产物（据推测）总重量相同。例子：在分开水的氢和氧分子时，需要大量的热，要达到 5,400 ° F.，两倍于铁的熔点。产生的氢和氧气的重量和水是一样的。如果划一根火柴，氧和氢将再结合成水。这些水重量和以前相同，但会释放分离成气体时所取得的能量（陀螺子）。

QUESTION: Is heat nothing, and yet it is capable of causing extreme changes in Matter?

问题：热什么也不是，可是它可以引起物质极大的改变？

ANSWER: No. Heat is electromagnetic energy (gyroscopic particles spinning and moving at the speed of light) and such electromagnetic energy comprises all Matter. In accordance with E = MC2, it simply requires vast quantities of gyroscopic particles to comprise a single speck of Matter. It would therefore require an incredibly sensitive scale to weigh the difference of release or absorption of Matter on an atomic basis. Such a scale presently does not exist.

回答：不。热量是电磁能量（陀螺子以光速运动和自旋），这种电磁能量组成所有物质。遵守 E = MC2，需要大量陀螺子组成一个物质微粒。因此需要一个极度灵敏的装置称重物质原子释放或吸收热量的区别。这种装置当前还不存在。

Lavoisier's classic series of experiments -which had scientific inadequacies -were intended to prove that Matter did not lose weight when burned or altered in chemical reactions. His statements are based upon a scale be invented that could weigh by a water drop the differences in the weight of Matter. This scale was an accurate invention for weighing commonplace items. However, Lavoisier's scale is totally inaccurate for weighing the loss of Matter in the form of gyroscopic- action-particles or electromagnetic energy in the form of heat, light, etc. Conclusion: Antoine Lavoisier invented an inadequate scale.

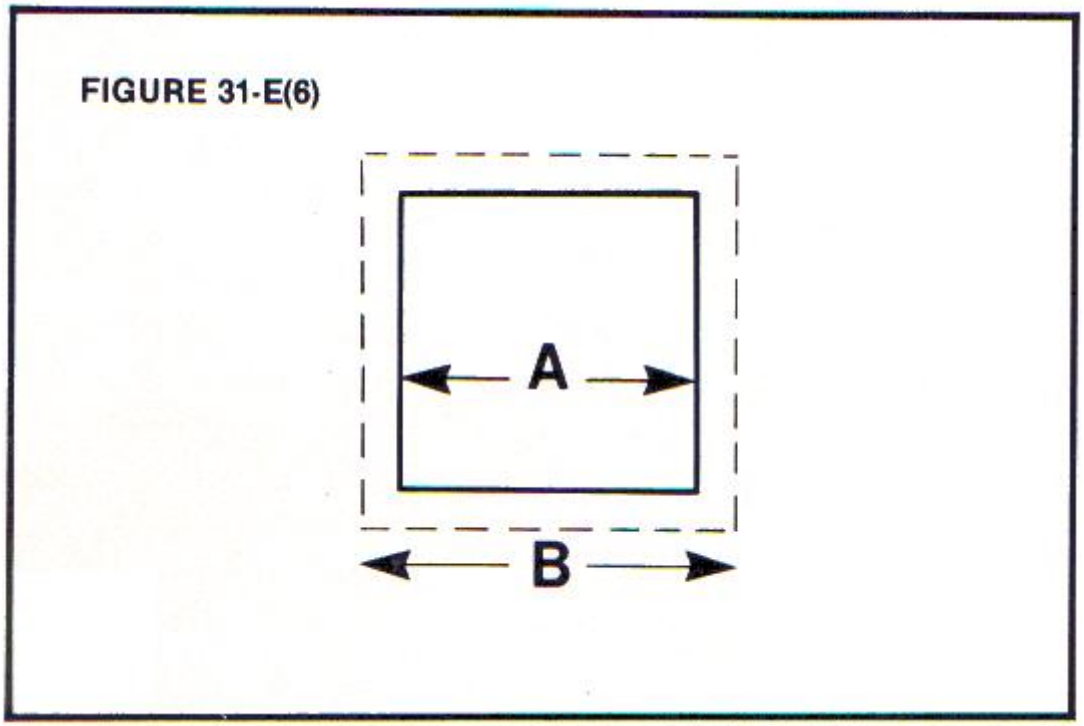
拉瓦锡的经典实验-有科学上的不足-有意的证明物质在燃烧或化学反应后没有失去重量。他的陈述基于可以称重一滴水的不同的装置。这个装置对于稳重一般物质是精确的。然而，拉瓦锡的装置是完全不精确的，对于称重以陀螺子形式或电磁能热、光形式失去物质时。总结：拉瓦锡发明的装置不够精确。

QUESTION: Considering the validity of E = MC2, how much energy is contained within a drop of water? It should be obvious that such energy is vastly greater than any energy release occurring via Lavoisier's restrictive experiments using an inadequate weight scale. [Remember, if totally converted into energy via E = MC2, the mass of a railroad ticket contains enough energy to run a large train around the world several times!] It is also very significant that Lavoisier as well as his scientific contemporaries had absolutely no conception that E = MC2.

问题：考虑 E = MC2 的正确性，一滴水中的多少的能量？很明显这些能量远远的大于拉瓦锡实验释放的能量。[记住，如果按 E = MC2 全部转换为能量，火车票的质量包含的能量可以让一大列火车绕地球几圈！]重点是拉瓦锡和同代人完全没有 E = MC2 概念。

It is a known fact that Matter undergoes a volume change when its temperature is raised. The volume expansion within solids is small, e.g., with a 10° rise in temperature the body of a bridge will expand approximately .04 inches for every 33 feet of its length.

众所周知，在温度上升时物质体积会改变。体积扩张对于固体是非常小的，例如，上升 10°桥每 33 英尺扩张大约.04 英寸。



The cube of metal depicted in Figure 31-E (6) first occupies a certain volume "A," but after it has been heated it occupies a greater volume "B" (exaggerated scale). In physics, this fact is presently referred to as a thermal expansion phenomenon!

图 31-E (6)中描绘的立方体开始占领体积“A”，但加热后占领体积“B”（扩大比例）。物理上，这个事实关系到热膨胀现象!

This thermal expansion phenomenon is explained via my consistent Theory that heat is electromagnetic energy consisting of gyroscopic particles and that such electromagnetic energy comprises all Matter. Joseph Black also explained the thermal expansion phenomenon in the 1760's. The gyroscopic-type-particles that comprise all atoms in material "A" physically have a preferred demand area with respect to the total electromagnetic energy (gyroscopic particles) within the material at the moment material "A" occupies the space described in Figure 31-E (6). [NOTE: A "demand area" is defined as that area physically required by the mechanical nature of a particular number of gyroscopic particles.)

热膨胀现象通过我一致的理论解释，热是组成陀螺子的电磁能量，这种能量组成了所有物质。Joseph Black 在 1760 年同样解释热膨胀现象。组成材料“A”所有原子的陀螺子有一个需要的空间，在材料“A”占据图 31-E (6)空间的时刻材料中所有电磁能量（陀螺子）需要的空间。[注意：“所需空间”被定义一定数量的陀螺子的自然需要。]

"Heat is electromagnetic energy (gyroscopic particles spinning and moving at the speed of light) and such electromagnetic energy comprises all Matter. "

“热是电磁能量（陀螺子以光速运动和自旋），这种电磁能量组成所有物质。”

At the moment material "A" expands to occupy space "B," additional gyroscopic particles or electromagnetic energy (heat) have been absorbed by the atoms of the material. This changes the preferred demand area of the gyroscopic-type-particles which comprise the atoms. In essence, the material absorbs heat by physically expanding to accommodate the resulting effects of the additional, quantitative input of gyroscopic particles.

在材料“A”扩张到空间“B”时，额外的陀螺子或电磁能量（热）被材料原子吸收。这改变了组成原子陀螺子需要的空间。本质上，材料吸收热量会通过物理扩张来容纳额外大量的陀螺子输入。

(7) Every gas has a "critical temperature" above which it cannot be liquefied.

（7）每种气体有一个“临界温度”，在这之上不能被液化。

QUESTION: Why is this so?

问题：为什么会这样?

ANSWER: Different gases consist of different atoms which contain varying quantities of electromagnetic energy or gyroscopic-type -particles. Such atoms release a minute portion of these gyroscopic particles in the form of heat. This heat is released in varying amounts before the particular demand area is sufficiently reduced to permit the atoms to physically compress close enough to become a liquid. EXAMPLE: Helium atoms have to release more gyroscopic particles to become a liquid at -452 °F. than carbon dioxide atoms release to become a solid at - 109 °F. Here is an interesting fact: liquid helium requires considerably less gyroscopic particle input to become a gas or vapor compared to carbon dioxide or water. However, it requires considerably less effort to cause the water vapor (steam) or carbon dioxide gas to release the newly-acquired gyroscopic particles (heat) than it does helium gas. This demonstrates that varying materials -depending upon the electromagnetic or gyroscopic-type-particles comprising the atoms -have definite, preferred space areas once the gyroscopic particles occupy that particular space area with respect to a particular gyroscopic particle or electromagnetic energy (heat) environment. Various environmental temperatures such as 75 °, 32 °, - 109°, -400° composed of varying quantities of gyroscopic particles will generate different effects.

回答：不同的气体由不同原子组成，有不同数量的电磁能量或陀螺子。这些原子以热量形式释放极小部分的陀螺子。热量释放是变化的，在被减小到特定需要空间允许原子压缩到液体之前。例子：氦原子到-452 °F 才能变成液体，必需释放更多陀螺子比二氧化碳，二氧化碳到- 109 °F 可以变为液体。这里有一个有趣的实事：液氦需要相当少的陀螺子输入就可以变成气体或蒸汽，相比于二氧化碳或水。然而，水或二氧化碳气体释放新获取的陀螺子（热）比氦气容易的多。这证明不同的材料-依赖于电磁或陀螺子组成原子-有确定的空间，一旦陀螺子占据特定的空间，相对于特定陀螺子或电磁能量（热）环境。变化的环境温度如 75 °, 32 °, - 109°, -400°组成变化的陀螺子数量产生不同的效果。

"In essence, the material absorbs heat by physically expanding to accommodate the resulting effects of the additional, quantitative input of gyroscopic particles. "

“本质上，材料吸收热通过物理扩张容纳额外的一定数量的输入陀螺子。”

(8) The facts demonstrate that when atoms are subjected to compression in any state (gas, liquid, or solid) they emit electromagnetic energy (heat or random gyroscopic particle flow) and proceed to "cool down." When the same atoms are subjected to expansion they absorb electromagnetic energy (heat) and "warm up." The reverse is also true. If electromagnetic energy (heat) as a quantity of gyroscopic particles is added to atoms, then they will expand. If atoms have electromagnetic energy (heat) or gyroscopic particles subtracted from their physical composition, then such atoms contract, e.g., conduction, etc.

（8）事实证明，当原子在任何状态（气、液、固）受到压缩时，它们会发出电磁能量（热量或随机陀螺子流）并“降温”。当同样的原子扩张时，它们会吸收电磁能量（热）并“升温”。反过来也是正确的。如果电磁能量（热）如一定数量的陀螺子加到原子中，它们会扩张。如果原子有电磁能量（热）或陀螺子从它们的物理组成去除，这些原子紧缩，例如，导体等。

(7) At first glance, when water becomes frozen it appears to be an exception to the above rule. However, water is not an exception. Because the atoms do compress with respect to one another, as the molecules create and demand a definite area relative to adjoining molecules, such action causes the molecules to create a solid form of water occupying a larger space than it does as a liquid due to empty space.

（7）乍看起来，当水结冰时它是上面原则的例外。然而，水不是例外。因为原子确实想到紧缩了，分子创建和需要一个特定的空间来相互连接，这种行为引起分子创建一个固体形式占据比液体更大的空间，因为中间的空隙。

See Figure 31-E (9) a.

看图 31-E (9) a。

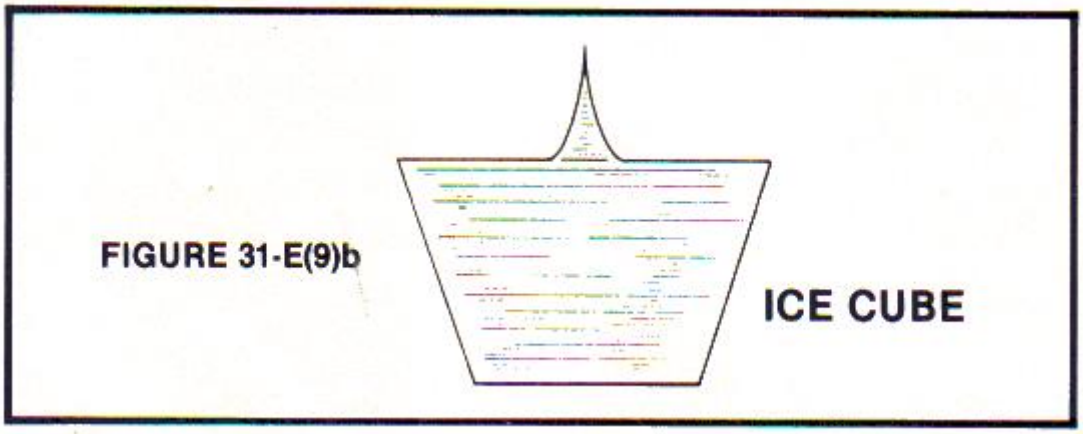
FIGURE 31-E(9)a

Since all molecules consist of atoms, the molecules react in accordance with the "instructions” of the atoms involved, i.e., the atoms of ice are compressed to their occupied area.

因为所有分子由原子组成，分子的反应和参与的原子“指令”一致，也就是说，冰的原子压缩了它们占据的空间。

Such compression is proven by observational results first brought to my attention by my lovely and devoted wife: when water is frozen in ice trays, the ice will at times form as shown in Figure 31-E (9)b.

这种压缩被观察结果证明，我妻子第一次引起我的注意：当在冰盘子里水结冰时，冰将有时如图 31-E (9)b 所示。



Such formation can only occur from atomic compression within the water affected by the freezing process. Increasing pressure internally applies compression within the ice cube and pushes or "shoots" the water from the center of the cube that has not yet frozen, but is super-cold and freezes very rapidly.

这种构成只能发生在原子压缩时，水被结冰过程影响。内部增加的压力作用于冰块，推或“射出”水从方块中间没有结冰的地方，但非常冷并很快结冰。

(10) Let's now return to the cannon-boring experiments of Count Rumford in 1798 and the ice rubbing experiment of Humphry Davy in 1799 which were supposed to prove the Caloric Theory wrong and that heat was simply a result of motion.

（10）让我们回到 Count Rumford1798 年的大炮实验，Humphry Davy 1799 年冰的摩擦实验证明热质说是错的，热量是简单的运动的结果。

The study of friction proves that heat release is the result of surface compression of the two materials involved! The coefficient of friction is defined as the ratio between two quantities -friction and pressure. Increasing contact pressure thus increases friction.

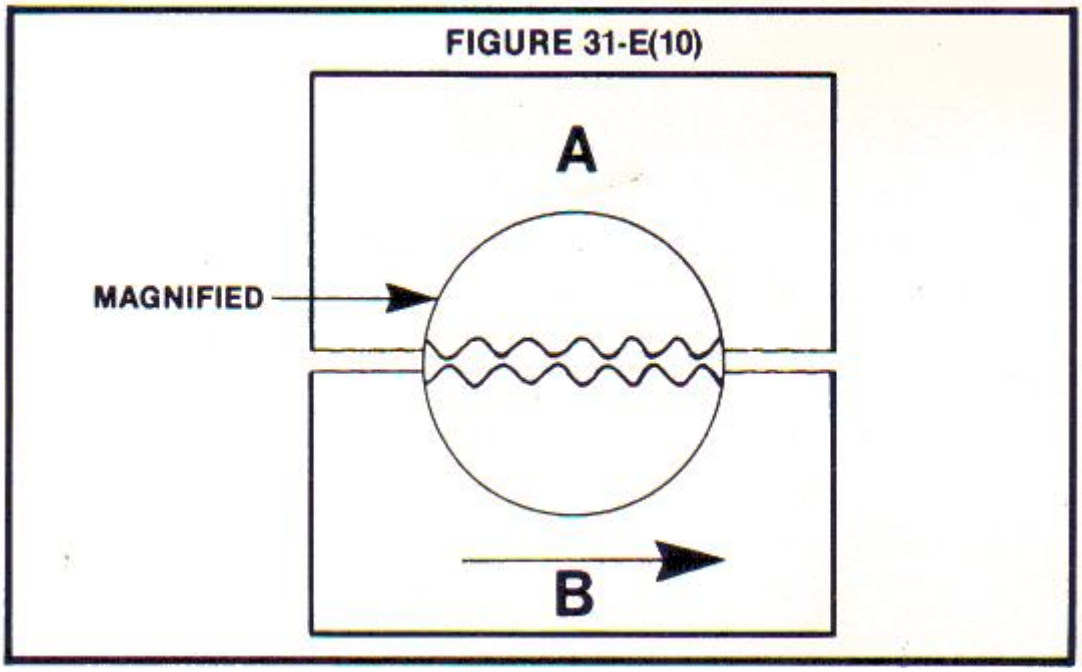
对摩擦的学习证明热释放是两块材料压缩表面的结果！摩擦系数被定义为摩擦力和压力的比率。增加触点压力也会增加摩擦力。

QUESTION : What does this really mean?

问题：这实际意味着什么?

ANSWER : Surfaces are actually rough on materials that appear smooth . (See Figure 31-E (10).]

回答：材料表面比看起来要粗糙的多。(看图 31-E (10))



If material B is moved in the direction of the arrow, the rough surface edges of materials A and B are compressed in opposite directions! The rough edges of material A will tend to be ground forward in the direction of the arrow and the rough edges of material B will tend to be ground backward , or in the opposite direction of the arrow.

如果材料 B 在箭头方向运动，材料 A 和 B 粗糙的表面边缘在相反方向压缩！材料 A 粗糙的边缘将趋于向箭头方向运动，材料 B 粗糙的边缘趋于返回，或箭头相反的方向。

CONCLUSION: All heat (electromagnetic energy) released from Matter as a result of friction is in reality the result of two surfaces being compressed in opposite directions. Therefore, friction is compression in a lateral direction on the outer surfaces of matter as a result of mechanical conveyance of energy pressure.

总结：所有热（电磁能量）从物质释放，摩擦的结果实际上导致两个表面在相反的方向压缩。因此，摩擦是物体表面横向压缩，能量压力机械传送的结果。

This can be simply proven by quickly rubbing the palms of your hands together. You will feel your hands release heat which comes from the atoms within your hands being compressed in a lateral direction. As soon as you stop rubbing your hands and hold them apart, you will feel the opposite results. Your hands will now feel cool for having released the heat, i.e., the gyroscopic particles or electromagnetic composition of your hands.

这可以被快速摩擦你的手掌来简单证明。你将感觉到你的手掌释放热量，来自你手上被横向压缩的原子。你停下摩擦你的手掌并分开它们，你将感觉到相反结果。你的手将感觉到凉，因为释放了热量，也就是，你手的陀螺子或电磁组成。

What is the conclusion of what I have shown with respect to heat?

我展示的关于热事实的结论是什么?

All heat emitted from Matter - whether a result of chemical reaction, mechanical compression reaction, conduction, etc. -is released as a result of the gyroscopic-type, electromagnetic particles (which comprise all atoms) being reduced past the point of their original demand area. As a result, such atoms will emit electromagnetic energy (heat) to adjust to the smaller, required demand area now occupied by the balance of the vast quantity of gyroscopic particles (electromagnetic energy) remaining in the Matter.

从物质发出的热-不论是化学反应还是机械压缩、导热等-都是释放陀螺电磁能量粒子（组成的所有原子）的结果，同时释放了它们原来所需要的空间。作为结果，这些原子将发出电磁能量（热）来适应更小的空间，被物质中存在的大量陀螺子（电磁能量）占据。

"All heat emitted from Matter is released as a result of the gyroscopic-type, electromagnetic particles (which comprise all atoms) being reduced past the point of their original, demanded area."

“物质放出的所有热量是陀螺电磁能量粒子（组成所有原子）释放的结果，同时释放了它们原来所需要的空间。”

All heat absorption from Matter -whether a result of chemical reaction, mechanical compression reaction, conduction, etc. -is absorbed as a result of the gyroscopic-type, electromagnetic particles (which comprise all atoms) being expanded past the point of their original demand area. As a result, such atoms will absorb electromagnetic energy (heat) to adjust to the increased required demand area of the total electromagnetic energy then in the Matter.

从物质吸收的所有热量-不论是化学反应还是机械压缩、导热等-都是吸收陀螺电磁能量粒子（组成的所有原子）的结果，同时扩展了它们原来所需要的空间。作为结果，这些原子将吸收电磁能量（热）来适应物质中总电磁能量增加的需求面积。

It would therefore appear that energy tends to flow from a condition of higher mechanical pressure (within one atom) to a condition of lower mechanical pressure (within another atom). I must stress, however, that I do not wish this concept (or any of my other concepts) to be interpreted (by those who follow me) in such a manner that the interpretation stifles further questioning or curiosity by a young person learning this information for the first time. The above statement may prove to be totally incorrect since I have obviously not seen or envisioned everything and all possible conditions within the Universe.

因此会出现，能量趋于从高压（一个原子中）流向低压（另一个原子）。我必需强调，然而，我不希望这个观念（或任何我的观念）被用这种方式解释（跟随我的人），这种解释遏制了年青人第一次学习这个知识时深入探询的好奇心。上面的陈述也许会被证明完全是错的，因为我明显不能理解或预见宇宙中的所有情况。

"All heat absorption from Matter is absorbed as a result of the gyroscopic-type, electromagnetic particles (which comprise all atoms) being expanded past the point of their original demanded area."

“从物质吸收的所有热量都是吸收陀螺电磁能量粒子（组成的所有原子）的结果，同时扩展了它们原来所需要的空间。”

FURTHER CONCLUSIONS: The critics of the Caloric Theory stated that heat was simply the result of motion. They were wrong. Heat is the result of motion as stated by the supporters of the Kinetic Theory who criticized the Caloric Theory. However, this view does not constitute proof against the validity of caloric in the form of electromagnetic energy.

更深入的结论：热质学的批评家说，热是简单我运动的结果。他们是错的。热是运动的结果如分子运动论的支持者批评热质说。然而，这种观点没有证据反对电磁能量形式热质的有效性。

Because the Caloric (electromagnetic energy) Theory indicates changes in the amount of caloric (electromagnetic energy) in Matter, heat does have motion. As you know from earlier Sections in this Book, gyroscopic particles move at the speed of light. Because Joseph Black's work anticipated E = MC2, his brilliant insight was far in advance of his time. We owe him recognition and respect for his accomplishments. (See Section 31-B.)

因为热质（电磁能量）说指出物质、热的热质（电磁能量）的改变确实有运动。如你从本书更早部分学到的，陀螺子以光速运动。因为 Joseph Black 接受 E = MC2，它的洞察力远远高于他的时代。我们应感激他的认识并尊重它的成就。（看 31-B 部分。）

Heat is electromagnetic energy (consisting of gyroscopic particles). Gyroscopic particles (or electromagnetic energy) comprise all Matter. Alterations in the heat (gyroscopic particles) of Matter cause a change in the amount (gyroscopic particles) of Matter in accordance with E = MC2.

热是电磁能量（由陀螺子组成）。陀螺子（或电磁能量）组成所有物质。物质热量（陀螺子）变化引起物质数量（陀螺子）的变化，遵守 E = MC2。

32. I shall now proceed to constructively refute the negative doctrines that are a result of the present "Three Laws of Thermodynamics."

32.我现在将进入建设性的驳倒当前“热力学三大定律”的结果的消极教义。

A. FACTS:

A. 事实：

1.**The Three Laws of Thermodynamics were conceived without an understanding of the relationship between heat (gyroscopic particles/electromagnetic energy) and Matter.**

2. The Three Laws of Thermodynamics were conceived without an understanding that there is an energy relationship other than the simplicity of Work= Force X Distance, Power =WROK/TIME, and Force = Mass X Acceleration.

3. The Three Laws of Thermodynamics were originally conceived without any knowledge, understanding, or anticipation of Einstein's equation of E = MC2.

4. The Three Laws of Thermodynamics were originally conceived without an understanding of Gravity, Electricity, Magnetism, Inertia, Matter, and Planetary Motion.

1. 热力学三大定律假定在热（陀螺子/电磁能量）和物质之间没有联系。

2. 热力学三大定律假定没有能量关系在 功=力*距离、功率=功/时间和力=质量*加速度 之外。

3. 热力学三大定律原始的假定没有任何关于爱因斯坦 E = MC2 的知识和理解。

4. 热力学三大定律原始假定没有对重力、电、磁、惯性、物质和行星运动的理解。

B.QUESTION: If none of these things were understood at the time that the Three Laws of Thermodynamics were conceived, how can these three laws be so "all encompassing" as to be capable of predicting - on a seemingly "infallible" basis - the "Doom of the Universe" and the "Total Impossibility of Perpetual Motion?" Those who made such predictions must have understood the mechanical workings of the Entire Universe.

B.问题：如果热力学三大定律假定时这些都没有被理解，热力学三大定律怎么能预测-在一个看似“绝对可靠”的基础上-“宇宙的命运”和“永恒运动不存在”？可以做这些预测的人必须理解整个宇宙的运转。

QUESTION: Did they?

问题：他们是吗？

"The Three Laws of Thermodynamics were conceived without an understanding of the relationship between heat (gyroscopic particles/ electromagnetic energy) and Matter."

“热力学三大定律的假定没有对热（陀螺子/电磁能量）物质的理解。”

C. The "First Law of Thermodynamics" (1850) states:

C. “热力学第一定律”（1850）：

"Energy can be exchanged in the form of heat or of mechanical work, but its total quantity remains constant. "

“能量可以以热量或机械功形式交换，担总量保持不变。”

The First Law of Thermodynamics is one of the most positive scientific statements ever made, although this was not the initial intent of this Law.

热力学第一定律是最正确的科学陈述，虽然这不是这个定律的原始意图。

QUESTION: What does this Law say?

问题：这个定律说了什么？

ANSWER: If one cannot destroy energy, this means that energy always exists. If energy always exists, one can always use it. The Facts have indicated to me that the gyroscopic particle composition of all Matter is totally in accord with the First Law of Thermodynamics since it appears that the energy (spin speed) of the gyroscopic particle cannot be consumed!

回答：如果不可以毁灭能量，这意味着能量永远存在。如果能量永远存在，就可以永远用它。事实已经指出组成所有物质的陀螺子完全和热力学第一定律一致，因为陀螺子的能量（旋转速度）不能被消耗。

D. The "Second Law of Thermodynamics" (1850):

D. “热力学第二定律”（1850）：

The First Law of Thermodynamics proves that the implications of the Second Law of Thermodynamics are incorrect! The Second Law of Thermodynamics represents a conclusion concerning the use of heat based upon primitive, 19th-century mechanical devices. The "Second Law of Thermodynamics" may well apply to such primitive mechanical devices, but it has absolutely nothing to do with the implications of E = MC2!

热力学第一定律证明热力学第二定律的含义是错误的！热力学第二定律是基于原始 19 世纪机械装置使用的总结。“热力学第二定律”也许可以用于这此原始的机械装置，但它完全不适用于 E = MC2!

"The First Law of Thermodynamics proves that the implications of the Second Law of Thermodynamics are incorrect!"

“热力学第一定律证明热力学第二定律的含义是错误的!”

As I have demonstrated earlier, many of the 19th century scientists believed heat to be only the result of motion. They did not understand that heat was simply the conversion of Matter into gyroscopic particles or electromagnetic energy (heat) as implied by the brilliant work of Joseph Black. Nor did they realize that heat (consisting of gyroscopic particles or electromagnetic energy) was convertible into Matter. They were completely ignorant concerning E = MC2. In their ignorance, they would have said that anyone claiming such a statement was stupid. In my opinion, Joseph Black would have readily accepted the implications of E = MC2.

在我证明之前，许多 19 世纪的科学家相信热只是运动的结果。他们不明白热是简单的物质转换为陀螺子或电磁能量（热），如 Joseph Black 暗示的那样。他们没有人意识到热（由陀螺子或电磁能量组成）可以转换为物质。他们完全忽视了 E = MC2。因为他们的愚昧，他们说任何这样认为的人是愚蠢的。在我的观点里，Joseph Black 已经真正接受了 E = MC2 的含义。

In 1824, Sadi Carnot published a paper entitled "Reflections on the Motive Power of Heat." Carnot had discovered that heat must flow "downhill", i.e., heat must change from high to low temperatures to perform work. Such a conclusion was based upon the observation of primitive inventions and has no real connection with the essential nature of heat or E = MC2. Joseph Black understood the nature of heat as early as 1760 - others did not.

在 1824 年，Sadi Carnot 发表了上篇论文“关于热运动的思考”。Carnot 已经发现热必须向“下”流动，也就是，热必须从高温到低温来做功。这种总结是基于原始的观察，没有真正联系到热的自然本质或 E = MC2。Joseph Black 早在 1760 年就理解了热的原理-其他人则没有。

By 1850, it was concluded throughout the scientific community that Carnot's discovery of a definite direction for heat flow laid the foundation for one of the basic laws of physics: the Second Law of Thermodynamics. The law was first formulated in 1850 by the German physicist, Rudolf Clausius, who stated, "It is impossible for a self-acting machine, unaided by any external agency, to convey heat from one body to another at a higher temperature."

到 1850 年，科学界总结 Carnot 热流动方向的发现为一个基础的物理定律：热力学第二定律。这个定律由德国物理学家 Rudolf Clausius 第一次确切阐述，他说“热不可能自发地从较冷的物体传递到较热的物体”。

The essence of the Second Law of Thermodynamics is this: heat will not flow of its own accord from a cold place to a hot one. Again, I repeat that this statement has absolutely nothing to do with the essence of heat and demonstrates a total lack of understanding that heat is gyroscopic particles (electromagnetic energy) which comprises all Matter and that E =MC2.

热力学第二定律的本质是这样的：热不可能自发地从较冷的物体传递到较热的物体。再一次，我重复这句话，完全和热的本质无关，证明完全不理解热是组成所有物质的陀螺子（电磁能量），不理解 E =MC2。

In physics it is presently believed that this unidirectional flow if heat, as stated by the Second Law of Thermodynamics,

implies the "Doom (or heat death) of the Universe." I vigorously disagree with this unfounded statement! All of the facts now presented in science prove this closeminded statement to be totally incorrect! This negative statement has been an extreme hindrance to the diligent progress of science since it closes one's mind to creative thought and has succeeded in unjustly influencing young minds that were taught to accept it.

物理学中，当前相信如果热单向流动，如热力学第二定律所说，暗示“宇宙的死亡（或热寂）”。我非常不同意这个无根据的说法！所有当前科学事实证明这种说法是完全错误的！这种不正确的陈述已经极大阻碍了科学进步，因为它关闭了人们的创新思想，成功不正确的影响了年青人的思想，被教授到完全接受它。

Electromagnetic energy is perpetually changing from energy to Matter and from Matter to energy. [While I fully realize that the use of the word "perpetual" violates current scientific taboos, I will do so anyway.] The gyroscopic entity I have described in this Book perpetually spins and travels at the speed of light in accordance with E =MC2. Even if all physical Matter could become exactly the same temperature, the gyroscopic particle (electromagnetic energy) within Matter is still moving at the speed of light. Any Matter could still be caused to release its incredible electromagnetic energy (gyroscopic particle) composition!

电磁能量永远在进行从能量到物质和从物质到能量的变化。[当我充分认识到“永恒”一词的使用触碰到当前科学禁忌时，我无论如何也要这样说。] 我在这本书中描述的陀螺实体永远在以光速运动和自旋，遵守 E =MC2。即使所有自然界所有物质变成相同的温度，物质中的陀螺子（电磁能量）仍然以光速运动。任何物质仍然会释放它不可思议的电磁能量（陀螺子）。

A chain reaction could be induced within a mass the size of a planet, thereby causing the mass to release its electromagnetic energy (gyroscopic particle composition) at a rate as rapid as that of the Sun. The mass would then cause a source of heat greater than its surroundings which were retaining the major portion of their gyroscopic particles (electromagnetic energy) composition within the physical boundaries of the materials. All heat is gyroscopic particles (electromagnetic energy). All Matter is gyroscopic particles (electromagnetic energy). All Matter can release its gyroscopic particles in the form of heat, light, electrical current, electromagnetic fields, electromagnetic waves, electromagnetic radiation, or in smaller quantities of its total physical form. However, it makes no difference in what form Matter is released, since it is always composed of gyroscopic particles (electromagnetic energy).

可以感应到星球内部的连锁反应，引起质量以太阳那要样的速度释放电磁能量（陀螺子）。这些质量产生一个比周围环境更热的源，材料的物理边缘将保存主要的陀螺子（电磁能量）。所有的热是陀螺子（电磁能量）。所有物质是陀螺子（电磁能量）。所有物质可以释放它的陀螺子以热、光、电流、电磁区域、电磁波、电磁辐射等形式，或更小的形式。然而，物质释放什么是没有区别的，因为它总是由陀螺子（电磁能量）组成。

The reverse is also true: all gyroscopic particles (electromagnetic energy) can be converted into physical Matter! Having a basic understanding of the ingenious properties of the gyroscopic particle (electromagnetic energy) composition of all Matter in the Universe, the mathematical law of probability tells me that the probability of the Universe undergoing a "heat death " is zero.

反过来也是正确的：所有的陀螺子（电磁能量）或以转换为物质形态！如果对宇宙中组成物质的陀螺子（电磁能量）的巧妙特性有基础的理解，数学概念告诉我们宇宙“热寂”的可能性为零。

“The gyroscopic entity I have described in this Book perpetually spins and travels at the speed of light in accordance with E =MC2."

“本书中描述的陀螺子实体以光速运动和自旋，遵守 E =MC2。”

One of Joseph Black's important discoveries was that different substances have different capacities for absorbing or emitting heat (electromagnetic energy)! EXAMPLE: If 1 kg of iron at 80°C is immersed in 1 kg of water at 40 °C, then the equilibrium temperature is found to be 43.7°C. In other words, the same amount of heat (electromagnetic energy) has resulted in a much greater temperature change in the iron than in the water.

Joseph Black 的一个重要发现是不同物体对吸收和发出热（电磁能量）的是不同的！例如：1 千克的铁在 80°C 时浸入 1 千克 40 °C 的水中，平衡温度为 43.7°C。换而言之，同样的热量（电磁能量）导致铁产生大于水的温度变化。

The same unfounded statement of the Second Law of Thermodynamics is also used in present physics to have stamped the final label of "FUTILE" on the quest for "Perpetual Motion." I would agree that "Perpetual Motion" would be futile as long as one accepts the validity of the Second Law of Thermodynamics as explaining everything in the Universe for all time. However, I challenge such validity. It is easy to recognize that in this sense, the Second Law has operationally been a deliberate attempt to close young minds who would be otherwise willing to question the "finality" of the Second Law of Thermodynamics. I am sure that there are many who read this Book who have been so unjustly influenced. Please recognize that the conversion of physical Matter to electromagnetic energy (gyroscopic particles) and from electromagnetic energy (gyroscopic particles) back to physical Matter is perpetual throughout the Universe and this phenomenal energy change can be conceptually understood and technologically harnessed in the immediate future for the incredible benefit of humanity !

热力学第二定律和无基础的陈述在今天的物理学被用于得出追求“永动”是“无效”的最终结论。只要一个人接受热力学第二定律的正确性来解释宇宙中所有的事物，我将同意“永动”是“无效”。然而，我挑战这样的正确性。很容易认识到，热力学第二定律已经故意的试图关闭年青人的思想，他们乐于对热力学第二定律结果产生怀疑。我确信许多读这本书的人已经受到了不公正的影响。请认识到，物质到电磁能量（陀螺子）和从电磁能量（陀螺子）到物质的转换是宇宙中永恒的，这种能量变化可以在不久的将来在概念上理解并在技术上控制，给人类带来不可思议的好处!

E. The "Third Law of Thermodynamics" (developed 1888-1902):

E. “热力学第三定律”（发展 1888-1902）

In 1902, measurements of the heat reaction of various substances were examined, and it was found that the free energies experienced an increasingly small variation as the reaction approached absolute zero.

在 1902 年，各种物质热反应的尺度被考查，发现在反应接近绝对零度时释放的能量越小。

This line of thought was initiated in 1848 by Lord Kelvin (William Thomson). Knowing that when cooled one degree from 0° to - 1 °C a gas loses 1/273 of its pressure, Kelvin reasoned that at -273 °C, gas should have no pressure and he called -273 °C absolute zero. Scientists at the time further reasoned that if "cold" is simply the absence of "heat," then there should be a point when there is absolutely no heat. This reasoning demonstrates a complete lack of understanding that heat is actually electromagnetic energy (gyroscopic particles) which comprise all Matter and that E = MC2. [Kelvin's knowledge is valuable, however, in terms of designing my Pioneering Invention where atom unalignment is important since heat causes random motion and rapid atom unalignment.]

这种思想始于 1848 年 Lord Kelvin（William Thomson）。当气体温度从 0°降到 - 1 °C 将失去 1/273 的压力，Kelvin 推理-273 °C 气体将没有任何压力，他叫- 273 °C 为绝对零度。那时科学家更深入推理如果“冷”是简单的缺少“热”，那么将有一点完全没有热。这种推理证明对组成物质的电磁能量（陀螺子）才是热完全缺乏理解。[然而，Kelvin 的理解是宝贵的，就我设计的创新发明来说，原子失序是重要的，因为热引起自由运动并加快原子失序。]

In accordance with the above concept regarding the absence of heat, the Third Law of Thermodynamics was proposed. It states that every substance known to man undergoes entropy, i.e., a measure of the availability of energy to perform work that approaches zero as the temperature approaches absolute zero (-273.16°C or - 459.69 °F).

为了和上面缺少热的概念一致，热力学第三定律被提出。所有人类已知的物质的熵都在增大，也就是说，能量的规则是靠近零如温度接近绝对零度（-273.16°C 或 - 459.69 °F）。

Einstein's equation of E = MC2 and the work I have accomplished prove that this statement concerning entropy is totally incorrect.

爱因斯坦的 E = MC2 等式和我完成的工作证明，这种关于熵的陈述是完全错误的。

Kelvin's results are explained by my prior discussion that heat (gyroscopic particles/electromagnetic energy) loss from Matter causes the atomic entities to demand a smaller area. This is why gases lose pressure at low temperatures since they are becoming a liquid state.

Kelvin 的结果可以用我的讨论解释，热（陀螺子/电磁能量）从物质损失引起原子实体减少空间需求。这就是为什么气体压力下降温度降低，因为它们正在变成液态。

The concept that cold is the absence of heat should be corrected as follows: Cold is simply a condition of less gyroscopic particles or electromagnetic energy (heat) in Matter. As long as one has Matter, one still has gyroscopic particles (electromagnetic energy or potential heat). Matter at - 459 .69°F still contains tremendous electromagnetic energy (or heat if properly released) or vast quantities of gyroscopic particles spinning at the speed of light. Only when Matter is gone, is all potential heat gone. The mechanical essence of E = MC2 is the gyroscopic-action-particle which is the basic building entity of all Matter.

冷是缺少热的概念应该修正如下：冷是简单的物质中陀螺子或电磁能量（热）较少的状态。只要有物质，就仍然有陀螺子（电磁能量或潜热）。物质在- 459 .69°F 依然包含极大的电磁能量（或热如果释放）或大量以光速运动的陀螺子。只有物质消失所有的潜热都会消失。E = MC2 的数学本质是陀螺子是物质的基础实体。

"Matter at -459.69°F still contains tremendous electromagnetic energy."

“物质在- 459 .69 ° F 依然包含极大的电磁能量.”

F. It is totally amazing to me that these three laws of thermodynamics have been so long accepted, knowing that their total premise is one of negativism which completely stops the creative thinking processes of a student who is motivated to question or discover a method for a better energy invention that would ultimately be of service to humanity. However, in spite of the negative intentions of those who developed it, the First Law of Thermodynamics proves just the opposite! It is a most positive, scientific statement.

F. 我完全震惊于热力学三大定律被接受这么长时间，要知道它的前是消极论，完全停止了学生创造思维的进程，他们本来会积极问问题或发现新的服务人类的能源发明。然而，虽然发明它的人意图消极，但热力学第一定律是相反的！它是科学和积极的陈述.

Although this may appear superficially paradoxical, I will make the positive statement that there is no place in science that negativism should be allowed to exist! The entire history of science has proven over and over again that, whenever it has been thought that something was not possible, it later turns out to be possible. Therefore, as the facts have proven, science should put forth positive statements of hopes and dreams that will perpetually stimulate the creative processes of the human mind. In contrast, throughout my sincere, scientific efforts of nearly two decades, I have had to fight against many negative "scientific statements" that were and are wrong. Such injustice has not been unique to my efforts but, on the contrary, it has been the common fate of most creative individuals throughout the History of Science.

虽然这似乎很浅薄和矛盾，我将做正确的陈述让科学中消极论无处存身！整个科学史已经一次次证明，当认为某物不可能时，它之后变成可能。因此，如已经证明的事实，科学应该发表积极有希望和梦想的陈述，不断的刺激人类的创造进程。相比这下，通过我 20 年的科学努力，我已经证明许多消极“科学陈述”是错误的。在我的工作中这种不公不是唯一的，但它是科学史上个人创新思想的共同命运。

Having a full awareness of this knowledge, I am bound to the task that my efforts will cause long-overdue changes to occur within the teaching system which -prior to this time -has stifled questioning, creative thoughts, and has hampered the advancement of science and the Human Race. It is my deep, caring belief that in years to come, our descendants will look back upon these times as truly the "Dark Ages," whereby they will state: "My parents and ancestors were taught in such a manner that the natural curiosity with which they were born was significantly stifled." In a later chapter I will discuss this educational problem in greater detail.

对这些知识有足够的觉悟，我的工作注定使长时间过期的遏制怀疑和创新思想并阻碍人类科学进步的教学系统发生变化。我深深的相信多年以后我的后代回头将这些时代看成“黑暗时代”，他们会说：“我的父亲和祖先被如此教育，与生俱来的自然的好奇心被完全扼杀”。在后面的章节我将详细的讨论这些教育问题。